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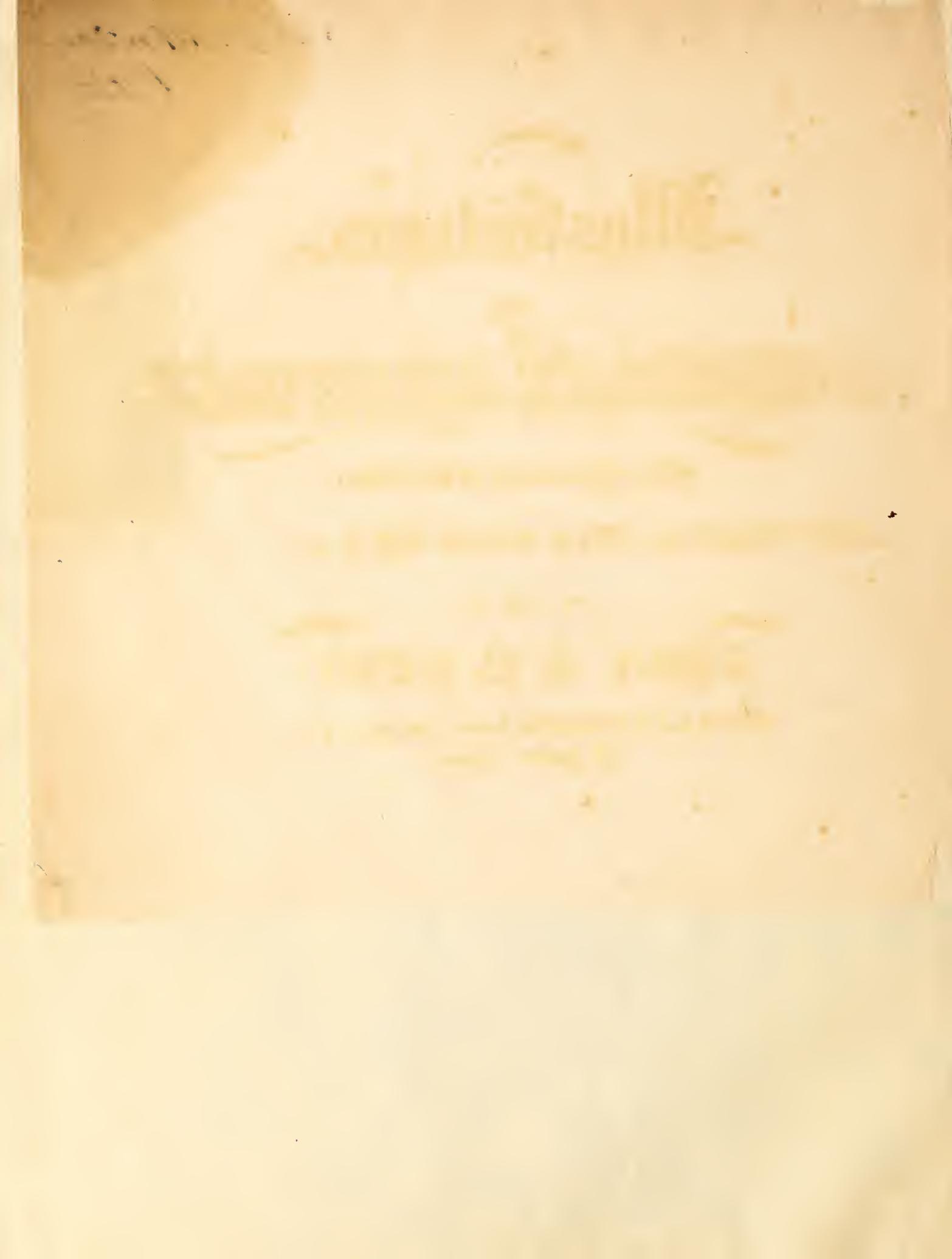
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W. C. Atkinson
1842

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Second Edition

GLASGOW:
BLACKIE & SON, 8, EAST CLYDE STREET;
AND 5, SOUTH COLLEGE STREET, EDINBURGH.



Illustrations

OF

SURGICAL ANATOMY,

with explanatory references;

FOUNDED ON THE WORK OF M. BLAIRD;

JOHN G. M. BURT,

SURGEON EXTRAORDINARY TO THE KING

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GLASGOW:

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Corolla
Hist. Coll.

TO

SIR JAMES M'GRIGOR, BART., M.D.,

DIRECTOR GENERAL OF THE MEDICAL DEPARTMENT OF THE ARMY,

§c. §c. §c.

THIS WORK IS DEDICATED,

AS A TRIBUTE OF HIGH RESPECT FOR HIS EMINENT TALENTS, AS WELL AS OF SINCERE
ESTEEM FOR THE UNIVERSALLY ACKNOWLEDGED WORTH AND
EXCELLENCE OF HIS CHARACTER,

BY

HIS OBLIGED AND FAITHFUL SERVANT,

JOHN G. M. BURT.



PREFACE TO THE FIRST EDITION.

AMONG the many valuable Works which have appeared in this country, illustrative of Medical Science, it seems rather extraordinary, that one upon Surgical Anatomy should still be a desideratum. To supply this want has been the object of the Editor in publishing the following Illustrations, founded on the much and justly-admired work of **M. BLANDIN.**

IN the progress of the undertaking, it occurred to the Editor, that **M. BLANDIN's** arrangement might be materially improved, and some additional Plates added, to render the illustrations more complete ;—this he has done, and has also accommodated the Letter-press to the most approved nomenclature of our Medical Schools.

WITH these explanations, he submits the Work to the Medical Profession, trusting that it will prove acceptable : and he begs to add, that, from the high character of Messrs **J. & J. JOHNSTONE**, the engravers, he feels quite confident that the Plates will be executed in the best style ; while, from the arrangements he has made with them, the expense will be such as to put it within the reach of all who may desire to obtain it.

PREFACE TO THE SECOND EDITION.

THE reception with which his labours have been met by all branches of the profession, the encomiums which have been bestowed upon the work, and the rapid sale of a large impression, have fully justified the opinion the Editor had formed of its utility, and prove the high estimation in which it is held.

To the distinguished individuals who have been pleased to make favourable mention of the following plates, and to those lecturers whose recommendations have procured for it so extensive a circulation, he offers his warmest acknowledgments. This Second Edition he trusts will be found no less deserving of their approbation.

EDINBURGH, 1833.



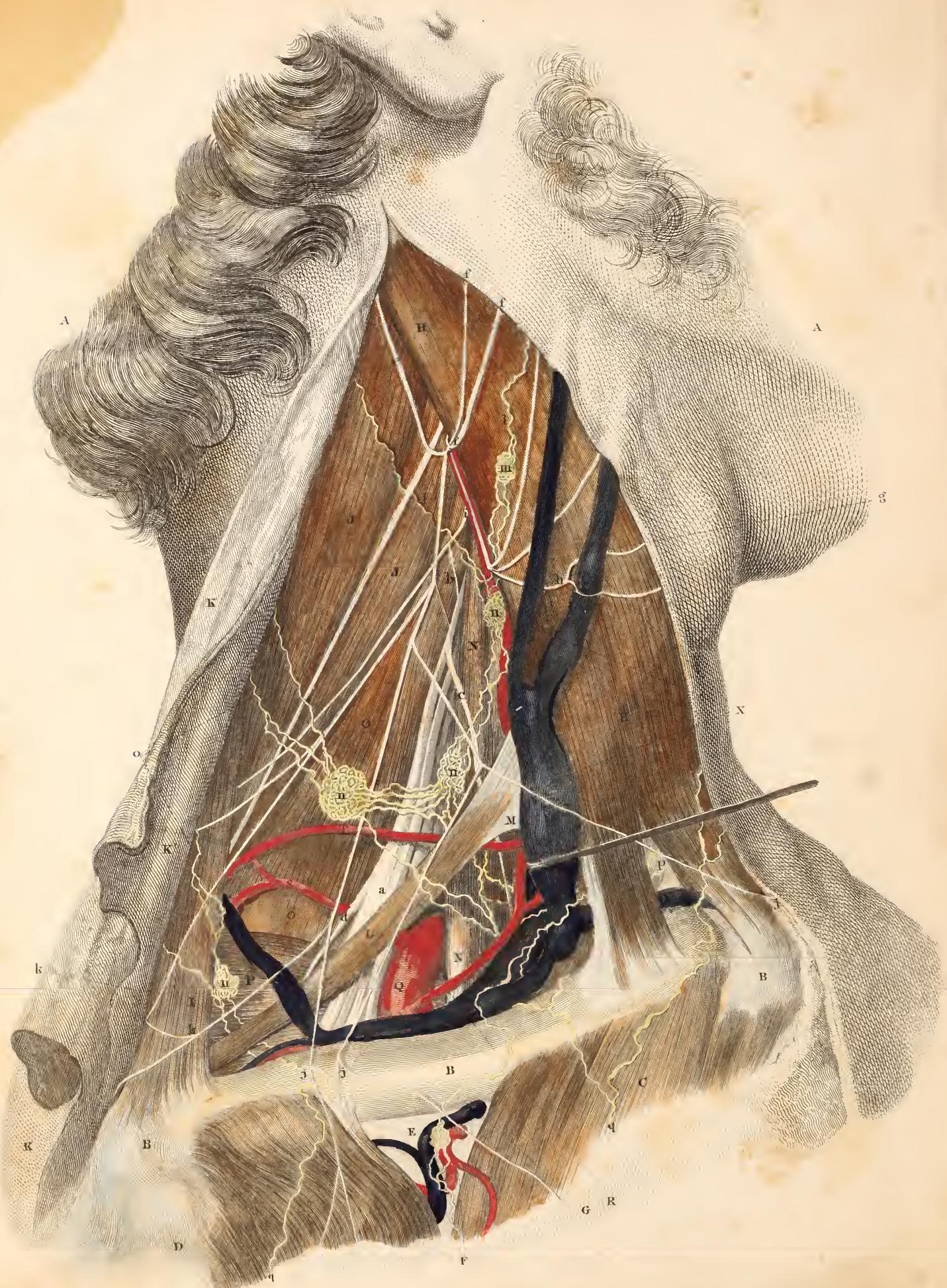


PLATE FIRST.

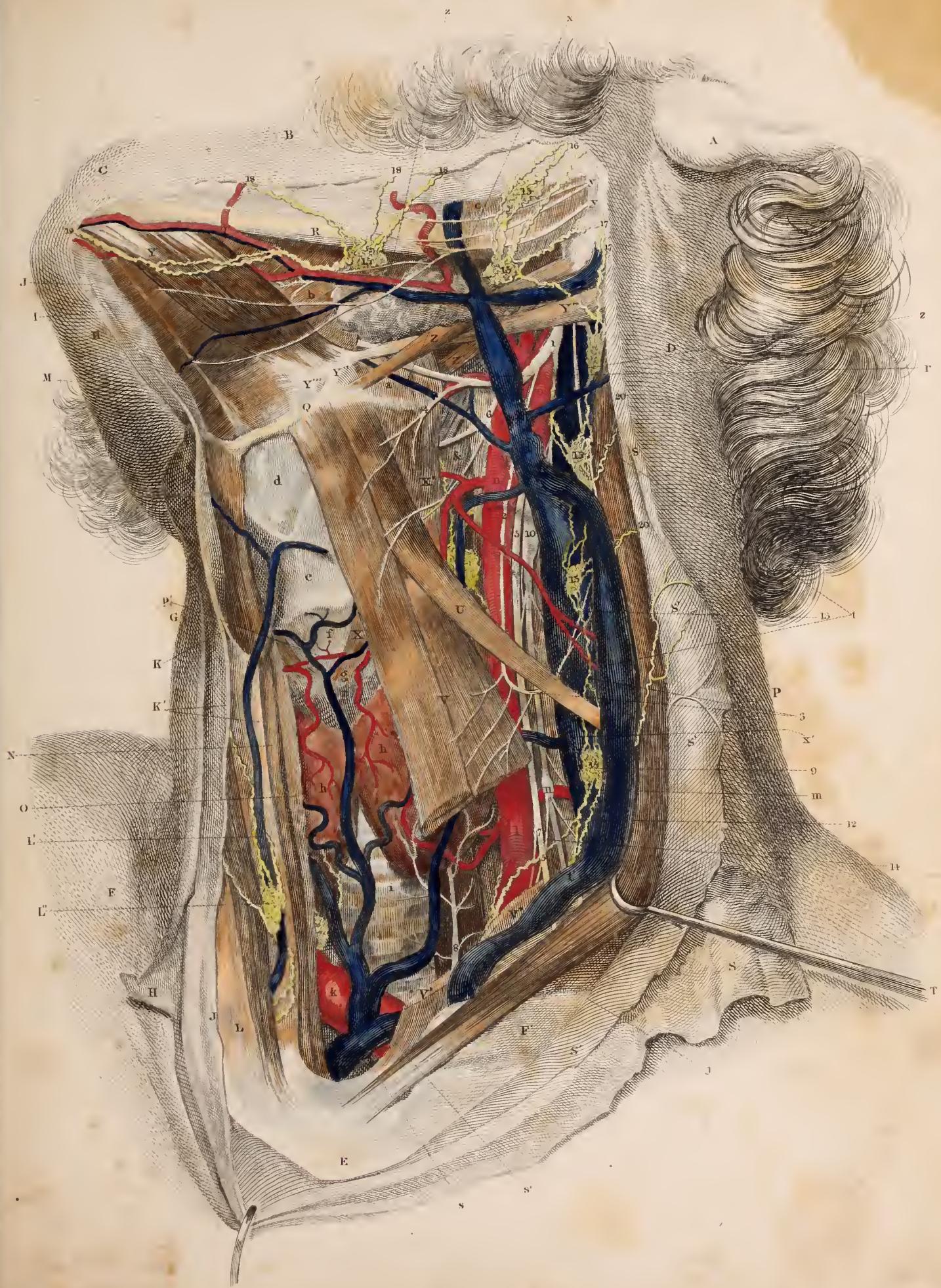
VIEW OF THE SUPERFICIAL ANATOMY OF THE NECK.

| | | | |
|----------|---|----------|--|
| A. A. A. | Lateral portion of the head, from the occiput to the ear, and from thence to the chin. | X. | External jugular vein, single, and of greater size below, dividing on the sterno-mastoid. This high division of the external jugular is common, but not constant. |
| B. B. | Clavicle. | Y | Termination of the anterior jugular vein, situated under the sterno-mastoid muscle, in front of the deep layer of the cervical fascia, and joining the external jugular. |
| C. | Portion of the great pectoral muscle. | Z. | Common trunk of the transverse cervical and supra-scapular veins, lying close to the clavicle. |
| D. | Portion of the deltoid muscle. | a. | Brachial plexus on the outer side of the axillary artery. |
| E. | Triangular space formed by the two preceding muscles with the clavicle, and filled with cellular substance, perforated for the transmission of the two following vessels. | b. | Communicating branch of the cervical and brachial plexuses. |
| F. | Acromial artery. | c. | Phrenic nerve, crossing the direction of the anterior scalenus muscle. |
| G. | Cephalic vein. | d. | Supra-scapular nerve. |
| H. H. | Sterno-mastoid muscle. | e. | Mastoidean nerve of the superficial cervical plexus. |
| I. | Anterior margin of the trapezius. | f. f. f. | Auricular nerve of the same plexus. |
| J. J. | Two digitations of the levator-anguli-scapulae. | g. | Three cervical nerves of the superficial cervical plexus, forming a curve on the posterior border of the sterno-mastoid muscle. |
| K. K. | The integuments reflected backwards. | h. | Branch from the superficial cervical plexus, entwining the jugular vein at the middle of the neck. |
| K. | The platysma myoides also reflected. | i. | Deep cervical branch of the superficial cervical plexus, passing towards the trapezius. |
| L. | Omo-hyoïd muscle. | j. j. j. | Descending supra-clavicular filaments of the cervical plexus. |
| M. | Portion of the deep-seated layer of the cervical fascia, arising from the middle tendon of the preceding muscle, and prolonging itself to the clavicle, against which it binds down the supra-scapular vessels. | k. k. | Descending supra-acromial filaments of the same plexus. |
| N. N. | Anterior scalenus muscle. | l. l. | Mastoidean and fascial lymphatic vessels. |
| O. O. | Fibres of the posterior scalenus muscle. | m. | Lymphatic ganglion, exterior to the sterno mastoid muscle. |
| P. | Superior digitations of the serratus magnus. | n. n. n. | Supra-clavicular lymphatic ganglia. |
| Q. | Subclavian artery, passing out between the scaleni muscles, and giving off, in the present case, as is not uncommon, a large artery, which crosses the brachial plexus, and represents the deep branch of the transverse cervical artery. | o. | Lymphatic vessels of the neck. |
| R. | Portion of the first rib, over which we can with facility apply a ligature to the subclavian artery. | p. | Lymphatic vessels which follow the anterior jugular vein, and which have their origin at the anterior part of the neck. |
| S. | Branch already pointed out, which is given off by the subclavian artery. | q. q. | Superficial lymphatic vessels of the thorax, which terminate in the supra-clavicular ganglia. |
| T. | Artery which arises from the subclavian, and represents the ordinary tract of the transverse cervical, of which we have in this instance the superficial branch only. | | |
| U. | Supra-scapular artery, lying close to the clavicle. | | |
| V. | Portion of the axillary vein in front of the anterior scalenus muscle. | | |

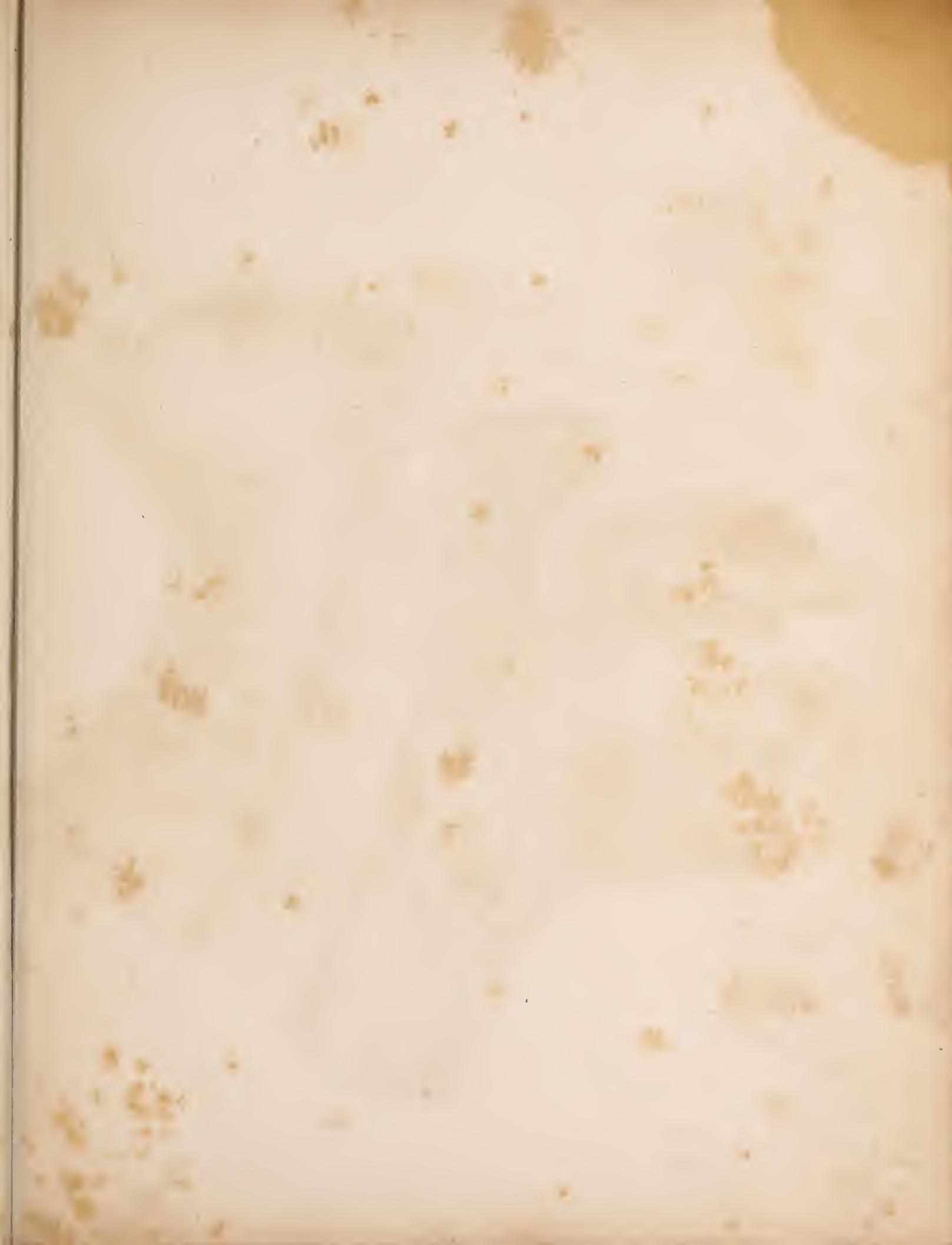
PLATE SECOND.

VIEW OF THE DEEP-SEATED ANATOMY OF THE NECK.

| | | | |
|-----------|---|-----------|---|
| A. | Portion of the ear. | f. | Crico-thyroid space, filled by an elastic membrane exhibiting small vascular openings. |
| B. | Portion of the cheek. | g. | Cricoid cartilage. |
| C. | Chin drawn upwards. | h. h. | Thyroid body. |
| D. | Portion of the occiput. | i. | Trachea. |
| E. | Superior extremity of the sternum. | j. | Œsophagus, behind, and a little to the left of the Trachea. |
| F. | Right clavicular region. | k. | Portion of the brachio cephalic trunk. |
| F. | Left clavicle. | l. | Left common carotid artery. |
| G. | Right side of the neck, on which we see in profile the relative situations of the different parts. | m. | Inferior thyroid artery, passing transversely behind the common carotid, and in front of the commencement of the œsophagus. |
| H. H. | The integuments. | n. | Division of the common carotid. |
| I. | Subcutaneous cellular substance. | o. | External carotid artery. |
| J. J. | Layer formed above by the platysma myoides, and below by the superficial cervical fascia. | o. | Internal carotid artery. |
| K. | Place where the cervical fascia, in the upper part single, divides into two principal layers. | p. | Superior thyroid artery. |
| K. | Anterior and posterior layers of the cervical fascia. | p. | Crico-thyroid artery. |
| L. | Inferior extremity of the sterno-mastoid muscle, situated between the two layers of the cervical fascia. | q. | Fascial artery. |
| L'. | The anterior external jugular vein, slightly developed, and confined between the two layers of the cervical fascia. | q. | Sub-mental branch of the fascial artery. |
| L''. | Ganglia and lymphatic vessels situated between the layers of the cervical fascia. | r. | Lingual artery. |
| M. | Fatty cushion lying below the upper part of the platysma myoides. | s. | Subclavian vein. |
| N. | Stero-hyoïd muscle. | s'. | Inferior thyroidal vein. |
| O. | Stero-thyroid muscle | t. | Internal jugular vein. |
| P. | Left side of the neck, where the different organs have been completely laid bare, and are seen nearly in front. | t'. | Anterior jugular vein. |
| Q. | Hyoid bone. | u. | Fascial vein. |
| R. | Inferior maxillary bone. | v. | Temporal vein, leaving the parotid. |
| S. S. | The skin reflected backwards. | x. | Lingual vein. |
| S. S. S'. | The platysma myoides also reflected backwards. | x'. | Lateral thyroid vein. |
| T. | Hook applied to the sterno-mastoid muscle, and drawn outwards to display the parts, naturally concealed. | y. y. | Filaments from the cervico-fascial branch of the fascial nerve. |
| U. | Omo-hyoïd muscle. | z. z. | Mylo-hyoïdean filament of the inferior dental and spinal nerves. |
| V. | Stero-hyoïd and thyroid muscles cut across. | 1. | Hypo-glossal, or ninth pair of cerebral nerves. |
| V'. V'. | Their inferior portions. | 2. | Its descending branch. |
| X. | Crico-thyroid muscle. | 3. | Arch formed by the preceding nerve, and the descending internal branch of the cervical plexus. |
| X'. | Thyro-hyoïd muscle. | 4. | Stero-hyoïdean filament of the hypo-glossal nerve. |
| Y. | Anterior belly of the digastric muscle. | 5. 5. | Pneumo-gastric nerve. |
| Y'. | Posterior belly of the same muscle. | 6. | Superior laryngeal nerve of the left pneumo-gastric, dividing itself into two branches. |
| Y''. | Pulley of the muscle. | 7. | Cardiac branch of the pneumo-gastric nerve. |
| Y'''. | Fibrous expansion which is given off by the tendon of the muscle. | 8. | Inferior laryngeal or left recurrent nerve, placed in front of the œsophagus. |
| Z. | Stylo-hyoïd muscle. | 9. | Cervical portion of the great sympathetic. |
| Z'. | Stylo glossus muscle. | 10. | Termination of the superior cervical ganglion. |
| &. | Portion of the inferior constrictor muscle of the pharynx. | 11. | Middle cervical ganglion, placed on the inferior curvature of the thyroid artery. |
| a. | Portion of the hyo-glossus muscle. | 12. | Communicating filament of the great sympathetic with the cervical nerves. |
| b. | Mylo-hyoïd muscle. | 13. | Cardiac nerve, superficial at its origin. |
| c. | Portion of the masseter muscle. | 14. | Origin of the middle cardiac nerve. |
| d. | Thyro-hyoïd space. | 15.15.15. | Lymphatic ganglia. |
| e. | Thyroid cartilage. | 16. | Parotidean lymphatic vessels. |
| | | 17. 17. | Mastoidean do. |
| | | 18.18.18. | Fascial do. |
| | | 19. | Sub-mental do. |
| | | 20. 20. | Cervical do. |







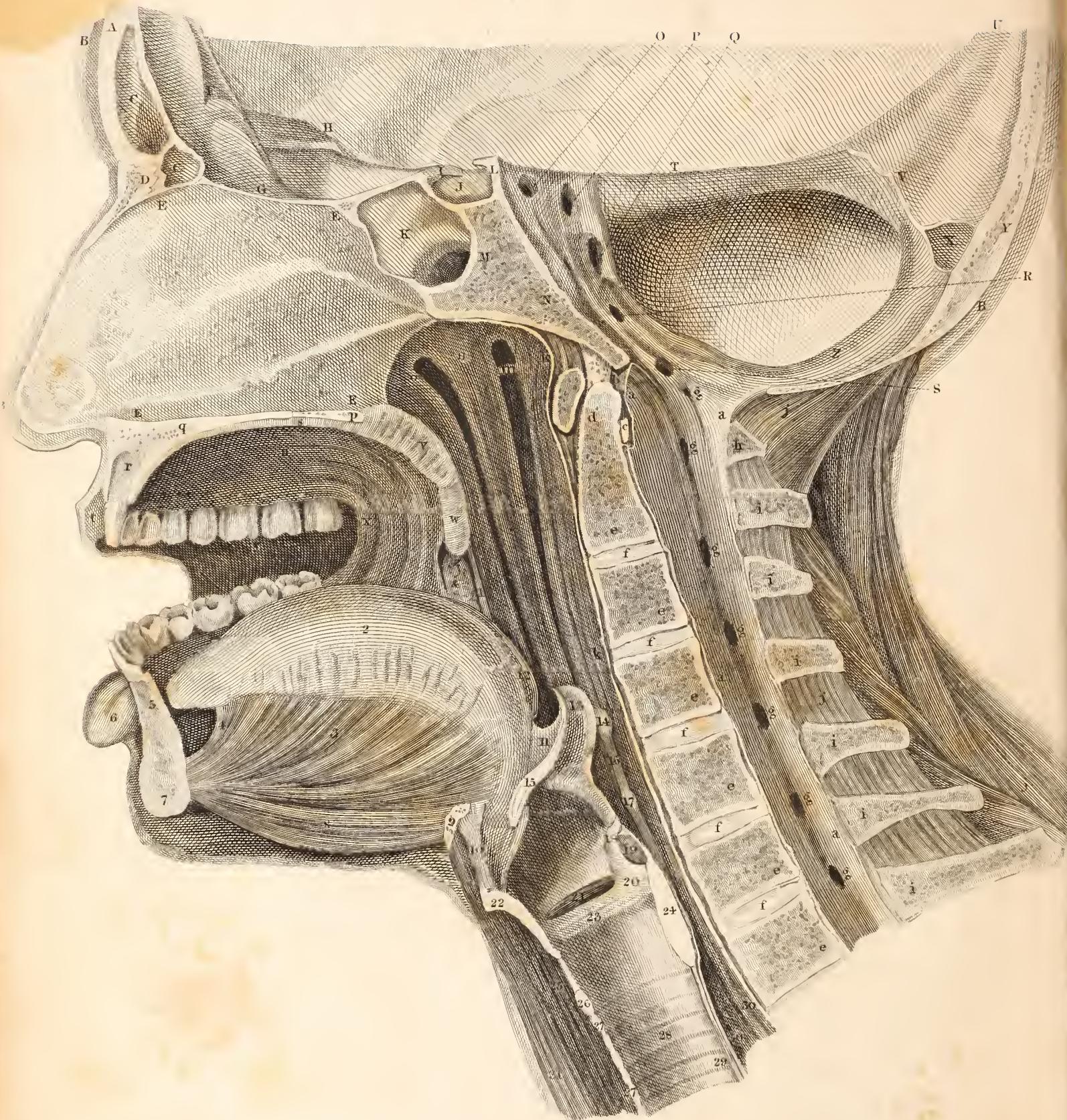


PLATE THIRD.

PERPENDICULAR SECTION OF THE HEAD AND NECK, TO SHOW THE RELATIVE SITUATIONS OF THE CAVITIES OF THE NOSE, MOUTH, LARYNX, AND PHARYNX.

| | | | |
|-------------------|--|---------|---|
| A. | Cut edge of the frontal bone. | o. | Opening of the eustachian tube. |
| B. B. B. | Cut edge of the integuments. | p. | Cut edge of the palate bone. |
| C. C. | Frontal sinuses. | q. | Cut edge of the palatine process of the superior maxillary bone |
| D. | Cut edge of the nasal bone | r. | Part of the cavity for the reception of the fang of the first left incisor tooth of the upper jaw. |
| E. E. E. E. | Left surface of the septum narium, covered by the pituitary membrane. | s. | Cut edge of the palatine membrane. |
| F. | Anterior portion of the falk cerebri. | t. | Cut edge of the upper lip. |
| G. | Cut edge of the cribriform plate of the ethmoid bone. | u. | Palate. |
| H. | Irregular surface of the right orbital process of the frontal bone. | v. | Cut edge of the soft palate. |
| I. | Anterior clinoid process. | w. | Uvula. |
| J. | Sella Turcica. | x. | Folds of the membrane of the mouth. |
| K. | Part of the left sphenoidal sinus, with the septum which divides it from that of the opposite side. | y. | Internal lining of the cheek. |
| L. | Cut edge of the posterior clinoid process. | z. | Glosso-palatine arch. |
| M. | Cut edge of the body of the sphenoid bone. | &. | Tonsil. |
| N. | Cut edge of the basilar portion of the occipital bone. | 1. | Pharyngo-palatine arch. |
| O. | Opening for the passage of the nerve of the fifth pair. | 2. | Cut edge of the tongue. |
| P. | Meatus auditorius internus, for the passage of the auditory and fascial nerves. | 3. | Genio-glossus muscle. |
| Q. | Foramen lacерum, for the passage of the nerve of the eighth pair and lateral sinus. | 4. | Frenum of the tongue. |
| R. | Foramen condylodeum anterius, for the passage of the nerve of the ninth pair. | 5. | Part of the cavity for the reception of the fang of the first left incisor tooth of the lower jaw. |
| S. | Round opening of the dura mater, at which the vertebral artery enters the cranium. | 6. | Cut edge of the under lip. |
| T. | Edge of the tentorium. | 7. | Cut edge of the inferior maxillary bone. |
| U. | Posterior portion of the falk cerebri. | 8. | Genio-hyoideus muscle. |
| V. | Part from which the tentorium has been detached on the left side. | 9. | Cut edge of the os-hyoïdes. |
| X. | Lateral sinus divided. | 10. | Ligament which connects the os-hyoïdes to the thyroid cartilage. |
| Y. | Cut edge of the occipital bone. | 11. | Frenum of the epiglottis. |
| Z. | Falk cerebelli. | 12. | Dorsum of the tongue. |
| a. a. a. a. | Cut edges of the lining membrane of the spinal canal. | 13. | Epiglottis. |
| b. | Cut edge of the ligament which connects the processus dentatus to the occiput. | 14. | Eminence caused by the posterior extremity of the corner of the os-hyoïdes. |
| c. | Cut edge of the circular ligament which connects the processus dentatus to the atlas. | 15. | Cut edge of the epiglottis. |
| d. | Cut edge of the processus dentatus. | 16. | Line denoting the situation of the ligament which connects the posterior extremity of the corner of the os-hyoïdes to the superior corner of the thyroid cartilage. |
| c. e. e. e. e. e. | Cut edges of the bodies of the second, third, fourth, fifth, sixth, and seventh vertebrae. | 17. | Situation of the superior corner of the thyroid cartilage. |
| f. f. f. f. f. | Intervertebral substance. | 18. | Corniculum of the larynx. |
| g. g. g. g. g. g. | Openings for the passage of the first, second, third, fourth, fifth, sixth, and seventh cervical nerves. | 19. | Cut edge of the aretenoid cartilage. |
| h. | Cut edge of the back of the atlas. | 20. | Base of the aretenoid cartilage. |
| i. i. i. i. i. i. | Cut edges of the spinous processes of the second, third, fourth, fifth, sixth, and seventh vertebrae. | 21. | Ventricle of the larynx. |
| j. j. j. | Muscles of the back of the neck. | 22. | Cut edge of the thyroid cartilage, in front. |
| k. k. | Cut edge of the pharynx. | 23. | Vocal chord. |
| l. | Sacculus cœcus of the pharynx. | 24. | Cut edge of the broad posterior portion of the cricoid cartilage. |
| m. | Membrane which sometimes divides the sacculus at this part. | 25. | Cut edge of the ligament which connects the small anterior portion of the cricoid cartilage to the inferior part of the thyroid cartilage in front. |
| n. | Eminence caused by a piece of cartilage at the extremity of the eustachian tube. | 26. | Cut edge of the small anterior portion of the cricoid cartilage. |
| | | 27. 27. | Cut edges of the cartilaginous rings of the trachea. |
| | | 28. | Internal surface of the trachea. |
| | | 29. | Cut edge of the membranous part of the trachea. |
| | | 30. 30. | Cut edges of the œsophagus. |
| | | 31. | Muscles in front of the neck. |

PLATE FOURTH.

THE EYE.

THIS PLATE IS INTENDED TO ILLUSTRATE THOSE PARTS OF THE EYE MOST COMMONLY CONCERNED IN SURGICAL OPERATIONS.

FIGURE FIRST

Represents the Eye-ball; part of the Cornea, Sclerotica, and Iris being removed.

- A. A. The tunica conjunctiva.
- B. The cornea.
- C. The iris.
- D. D. The sclerotica.
- E. The crystalline lens.
- F. The optic nerve.
- G. One of the ciliary processes.
- H. The zona lucida, or space between the anterior extremities of the ciliary processes and margin of the crystalline lens.
- I. I. The anterior termination of the retina.
- K. The part of the hyaloid membrane, which forms the canal of Petit, to which the pigmentum nigrum of the choroid coat and ciliary processes adhere.

FIGURE SECOND

Represents one-half of the Coats of the Eye, from which the humours have been removed.

- A. The cornea.
- B. B. The sclerotica.
- C. C. The anterior termination of the choroid coat, where the ciliary ligament commences.
- D. The ciliary ligament and processes, to which the iris is attached.
- E. The iris.
- F. The optic nerve, which expands within the choroid coat forming the retina.

FIGURE THIRD

Represents the Eye-ball, from which the Cornea and anterior half of the Sclerotica have been removed, by which the anterior part of the Choroid Coat, the Ciliary Ligament, the Iris, and the Crystalline Lens, are seen anteriorly.

- A. The sclerotica.
- B. B. The choroid coat.
- C. The ciliary ligament.
- D. D. The iris, having one-half torn down.
- E. E. The ciliary nerves.
- F. The crystalline lens.
- G. The anterior part of the vitreous humour which occupies the space between the ciliary processes and margin of the lens.

FIGURE FOURTH

Represents one-half of the right Orbit with its contents, divided perpendicularly.

- A. A. A. A. The bony orbit.
- B. B. The integuments, covering the anterior of the orbit.
- C. D. The upper and lower eyelids. The two black points at their nasal extremities, represent the orifices of the lateral lacrymal canals, called the puncta lacrymalia.
- E. The eye-ball, showing its coats, and humours contained within them.

- F. The optic nerve.
- G. The levator palpebrae superioris, the tendon of which is inserted into the tarsal cartilage of the upper eyelid.
- H. The levator oculi, the tendon of which is inserted into the sclerotica about the eighth of an inch from the margin of the cornea.
- I. The depressor oculi.
- K. The adductor oculi.
- L. The conjunctiva lining the eye-lids, and covering the anterior surface of the eye-ball, forming a pouch by its reflection.

FIGURE FIFTH

Represents the anterior half of the Coats of the Eye, seen from behind, the Humours being removed.

- A. The sclerotica.
- B. B. The choroid coat.
- C. C. The ciliary processes.
- D. The iris, having its circular aperture called the pupil.

FIGURE SIXTH

Represents the Vitreous and Crystalline Humours, as taken from the Coats of the Eye, represented in Figure Fifth.

- A. A. The hyaloid membrane of the vitreous humour covered by a portion of the retina.
- B. B. The part of the hyaloid membrane, which forms the canal of Petit, to which some of the pigment of the ciliary processes and choroid coat adheres.
- C. C. The space between the ciliary processes and margin of the lens, occupied by the anterior part of the vitreous humour, upon the hyaloid membrane of which, the vessels for the nourishment of the lens, proceed to the capsule.
- D. The crystalline lens.

FIGURE SEVENTH

Represents an Anterior View of the Eyelids and Lacrymal Organs, upon the removal of the Integuments and Orbicularis Palpebrarum.

- A. B. C. D. The situation of the margin of the bony orbit.
- E. The inner angle of the eye.
- F. The outer angle.
- G. H. The puncta lacrymalia, or orifices of the lateral lacrymal canals which lead to the lacrymal sac.
- D. I. The lacrymal sac.
- I. J. The nasal duct.
- J. The lower orifice of the nasal duct, entering the lower and lateral part of the nose, at the fossa formed by the inferior spongy bone (K), and superior maxillary bone (J).
- L. The orifices of the sebaceous ducts, leading from the meibomian glands, represented by a dotted line.
- M. The cartilage of the upper eyelid.
- N. The cartilage of the lower eyelid.
- O. The lacrymal gland.

Fig. 1.

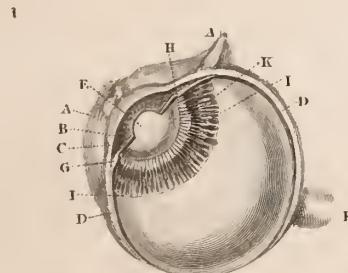


Fig. 2.

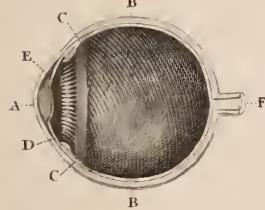


Fig. 3.

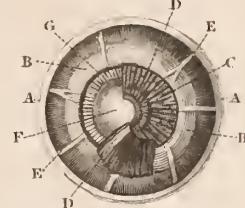


Fig. 4.

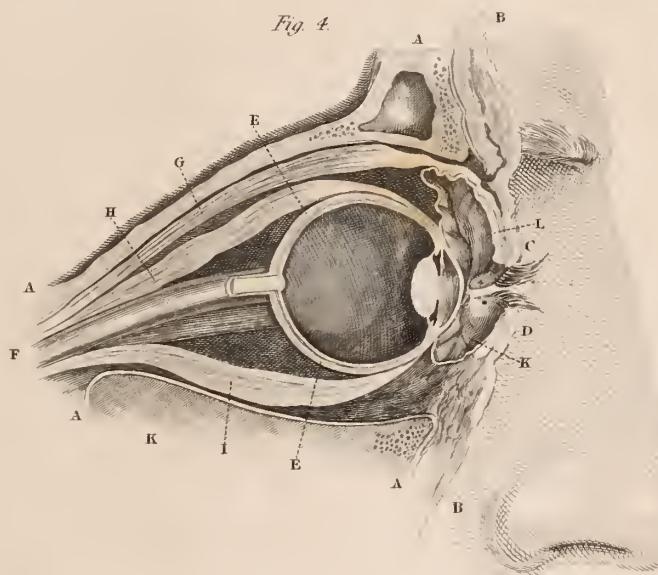


Fig. 5.

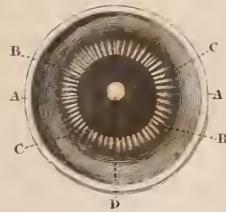


Fig. 6.

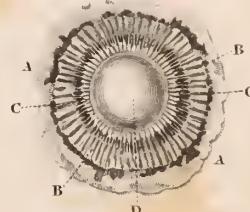
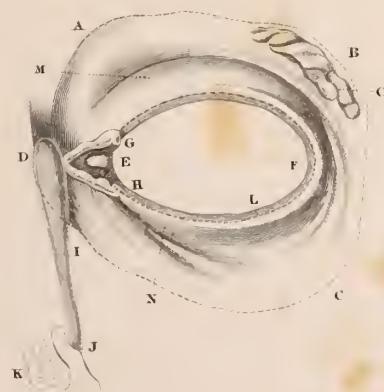
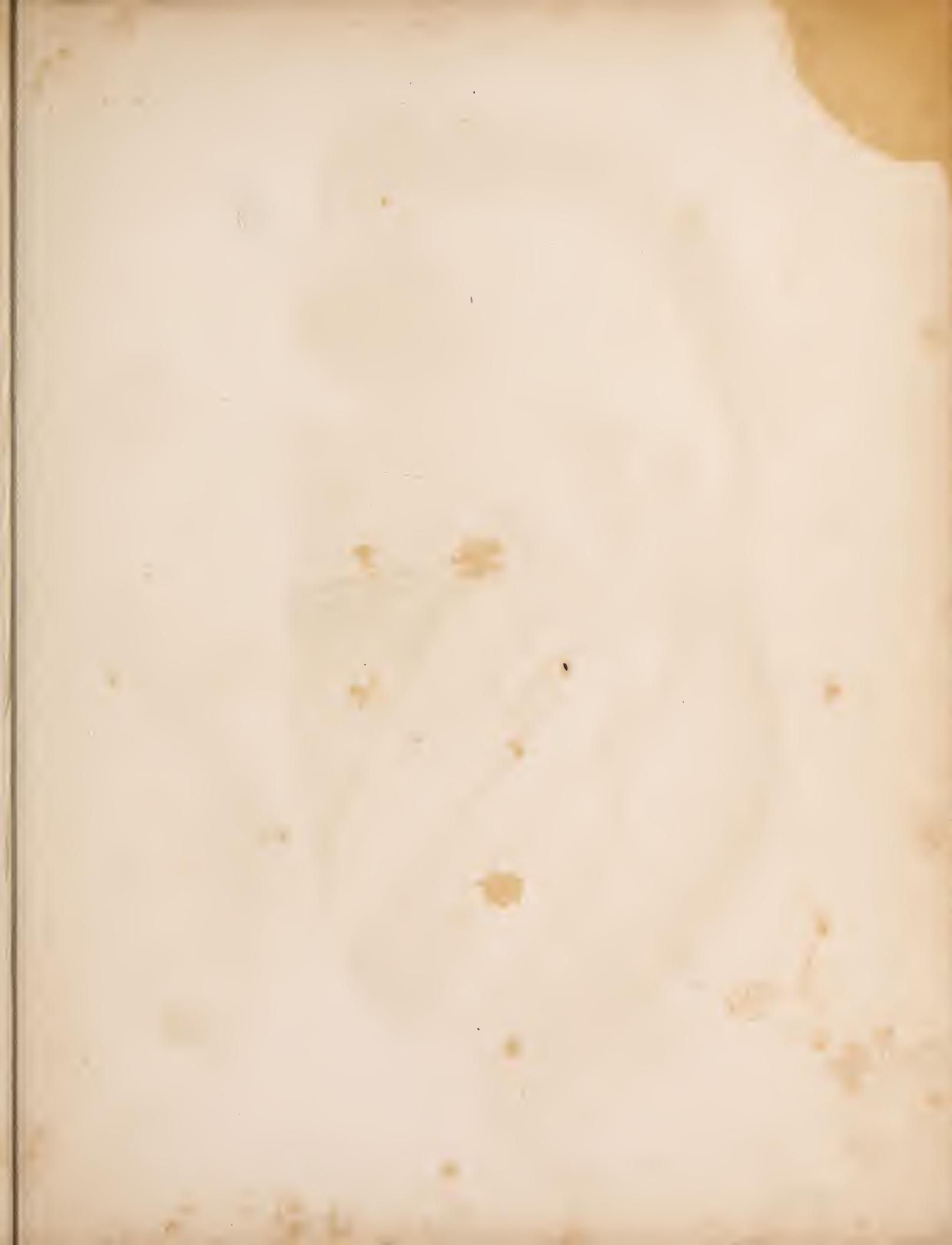


Fig. 7.







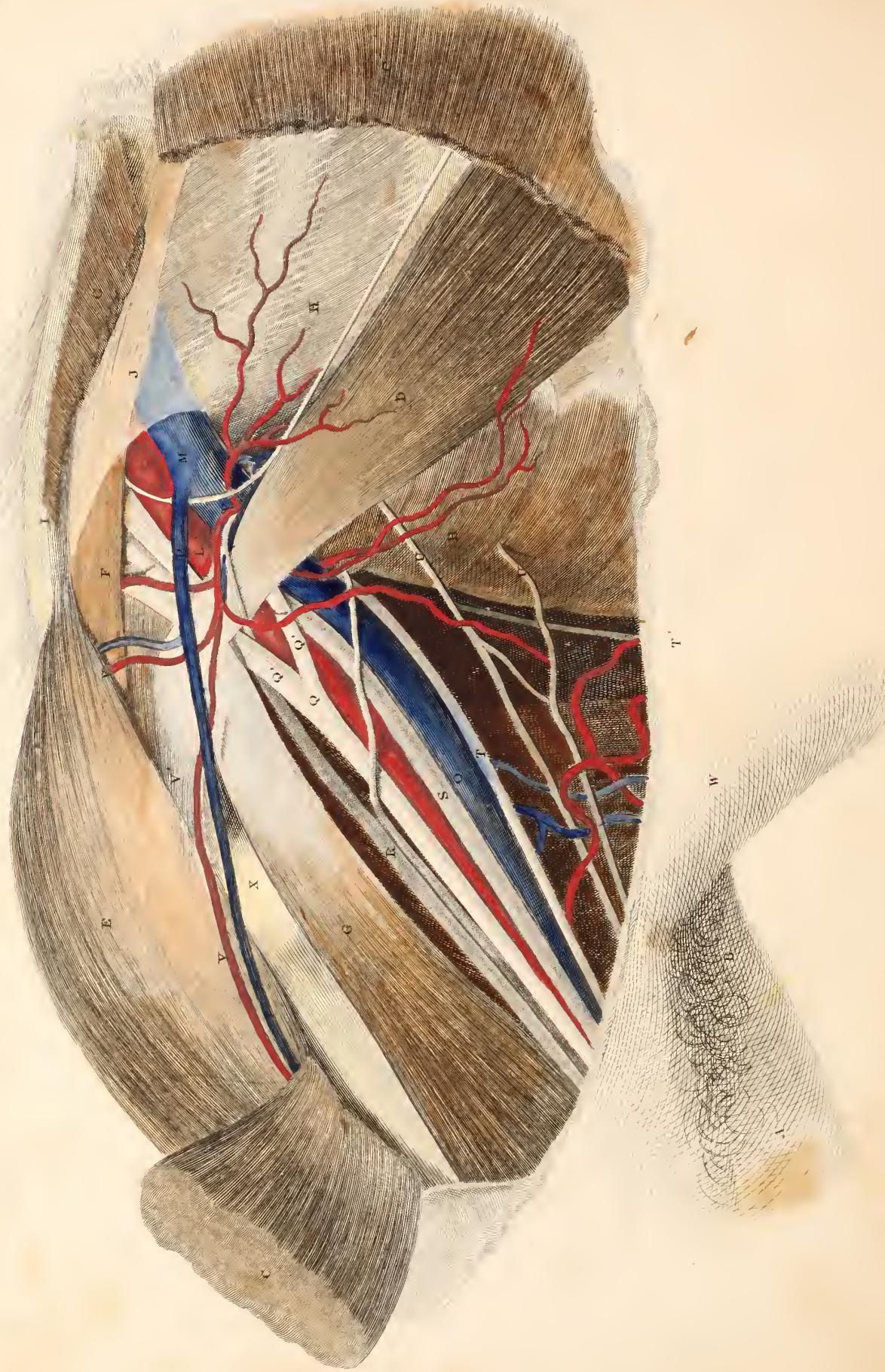


PLATE FIFTH.

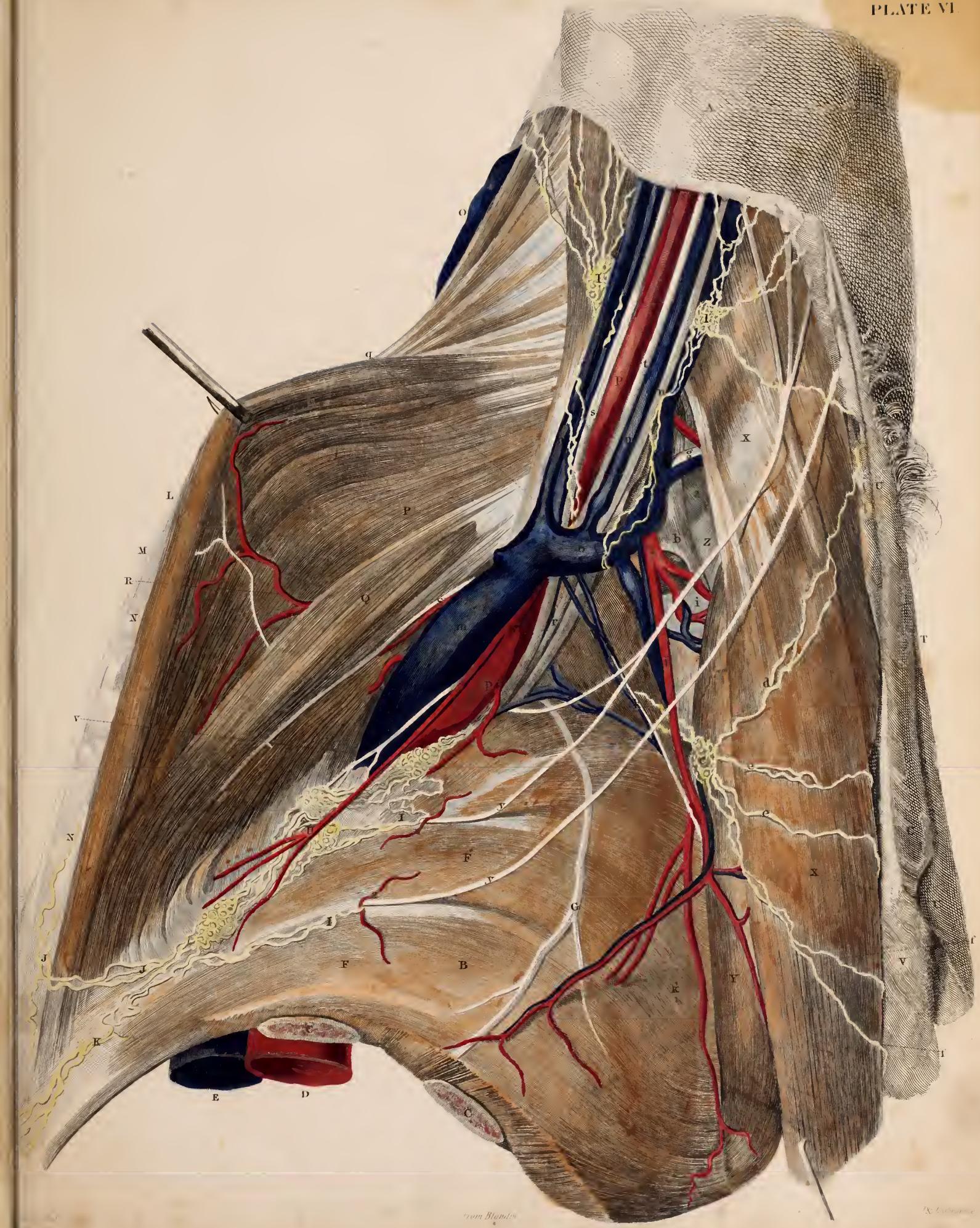
FRONT VIEW OF THE AXILLA, THE ARM BEING SLIGHTLY ELEVATED.

| | | | |
|-------|--|----------|--|
| A. | Portion of the inner side of the arm. | O. | Axillary vein. |
| B. | Hair of the arm-pit. | P. | Cephalic vein. |
| C. C. | Flaps of the great pectoral muscle, the origin reflected upon the chest, the insertion upon the deltoid muscle. | Q. | Median nerve, with its two roots, |
| D. | Lesser pectoral muscle. | Q'. Q'. | Which embrace the artery. |
| E. | Anterior portion of the deltoid muscle. | R. | Musculo-cutaneous nerve, following the course of the coraco-brachialis muscle, from the side of which a few fibres have been cut away to show the nerve. |
| F. | Sub-clavius muscle. | S. | The ulnar nerve, lying close upon the artery. |
| G. | Coraco-brachialis muscle. | T. | The internal cutaneous nerve, separated from the preceding by the axillary vein. |
| H. | Lateral portion of the thorax. | T'. | Posterior thoracic nerve in the bottom of the cavity, and attached to the serratus magnus muscle. |
| I. | Clavicle. | U. U. | Brachial branches of the intercostal nerves. |
| J. | Coraco-clavicular aponeurosis, covering the sub-clavius muscle; the internal and superior portions only of this aponeurosis seen here, the rest having been raised to show the vessels and nerves. | V. V. V. | Aeromial artery arising from the subclavian, behind the lesser pectoral muscle. |
| K. | Subclavian artery. | V. | Coraco-acromian ligament slipping under the deltoid muscle. |
| L. | Portion of the subclavian artery, where the ligature should be applied. | W. | Small arterial and venous branches of the axilla. |
| M. | Subclavian vein. | X. | Head of the humerus. |
| N. | Axillary artery. | | |

PLATE SIXTH.

THE AXILLA VIEWED FROM BELOW, THE ARM BEING FORCIBLY ELEVATED.

| | | | |
|-------|--|-------|---|
| A. | Portion of the arm. | a. | Situation where the naked fibrous capsule of the shoulder joint is seen. |
| B. | Portion of the costal region of the thorax, forming the internal boundary or wall of the axilla. | b. | Tendon of the subscapular muscle, passing on the inner side of the joint. |
| C. C. | The ribs cut obliquely. | c. | Lymphatic ganglion, which receives, |
| D. | Aorta. | d. | Lymphatics of the neck, |
| E. | Vena cava inferior. | e. e. | Lymphatics of the back, and |
| F. F. | Two superior digitations of the serratus magnus muscle. | f. f. | Lymphatics of the superior part of the loins. |
| G. | Posterior thoracic, or external respiratory nerve of Sir Charles Bell, passing over the serratus magnus. | g. | Circumflex vessels and nerves, passing between the triceps and humerus. |
| H. | Long thoracic artery passing like the preceding nerve upon the serratus magnus, but carried much farther forward, and encircled with lymphatic ganglions, which receive, | h. | Anterior or common scapular vessels. |
| I. I. | Lymphatic vessels passing out between the intercostal spaces, | i. | Transverse and dorsal branches of the anterior scapular vessels. |
| J. J. | Bundles of the lymphatic vessels of the mamma, and | j. | Axillary and descending branch of the common scapular vessels. |
| K. | Bundles of lymphatic vessels, coming from the upper part of the anterior abdominal parieties. | k. | Great subscapular nerve which accompanies the descending branch of the common scapular artery. |
| L. | Anterior boundary of the axilla, in which we find, | k'. | Posterior angle of the axilla. |
| M. M. | The skin and mamma, | l. l. | Two brachial lymphatic ganglions. |
| N. N. | Subcutaneous tissue, | m. | Axillary vein, placed in front of the artery, and formed by the union of the following veins:— |
| O. | Portion of the cephalic vein, | n. n. | Two brachial veins, |
| P. | Pectoralis major muscle, | o. | Basilic vein. |
| Q. | Pectoralis minor muscle, | p. p. | Axillary artery, placed between the vein and the plexus. |
| R. | Anterior thoracic vessels and nerve, and | q. | Place where the artery is embraced by the brachial plexus. |
| S. | Vessels and nerve of the pectoralis minor. | r. | Brachial plexus, placed behind the artery. |
| T. | Posterior wall of the axilla, from which the skin has been reflected from the base. | s. | Median nerve. |
| U. | Hairy skin from the base of the axilla. | t. | Ulnar nerve. |
| V. | Subcutaneous cellular tissue. | u. | Internal cutaneous and radial nerves united. |
| X. X. | Latissimus dorsi muscle, held with a hook. | v. | Situation where the bundles of vessels and nerves of the axilla occupy the anterior angle of that cavity. |
| Y. | Longissimus dorsi muscle. | x. | Situation where the axillary vessels and nerves are placed in the external angle of the axilla. |
| Z. | Tendon of the long head of the triceps muscle, near its insertion under the glenoid cavity. | y. y. | Brachial filaments of the intercostal nerves. |
| | | z. z. | Small ramifications of the intercostal arteries. |







Pl. VII. 2
Pl. VII. 1

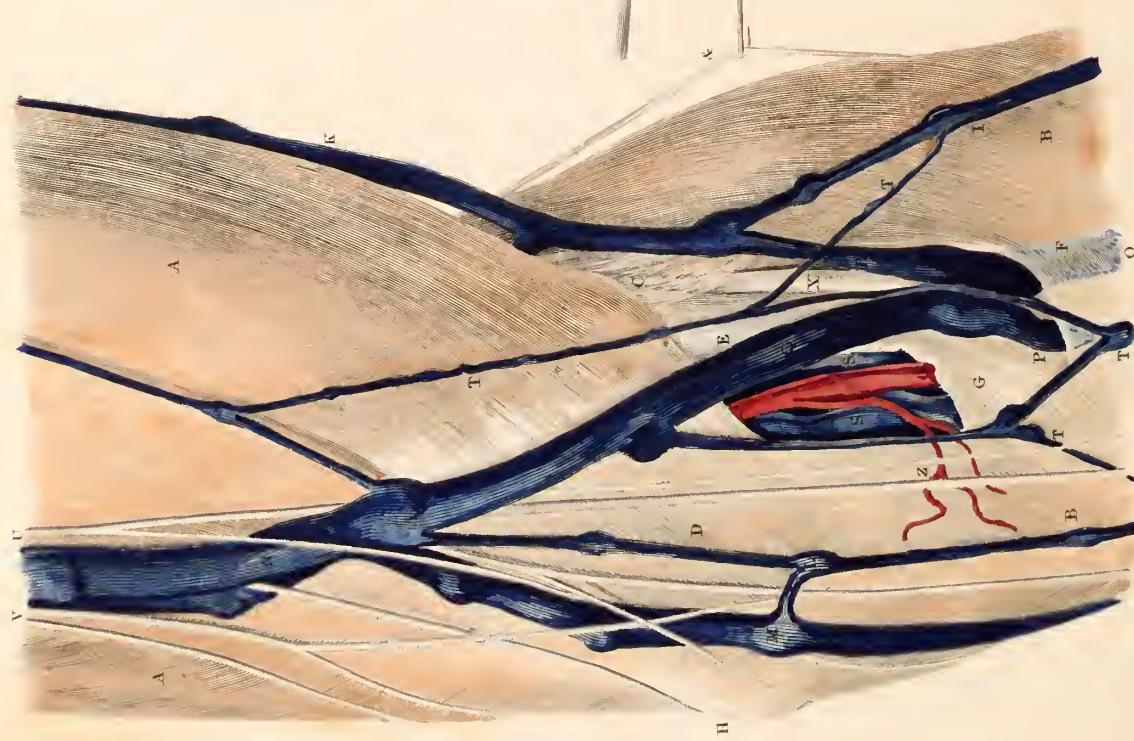
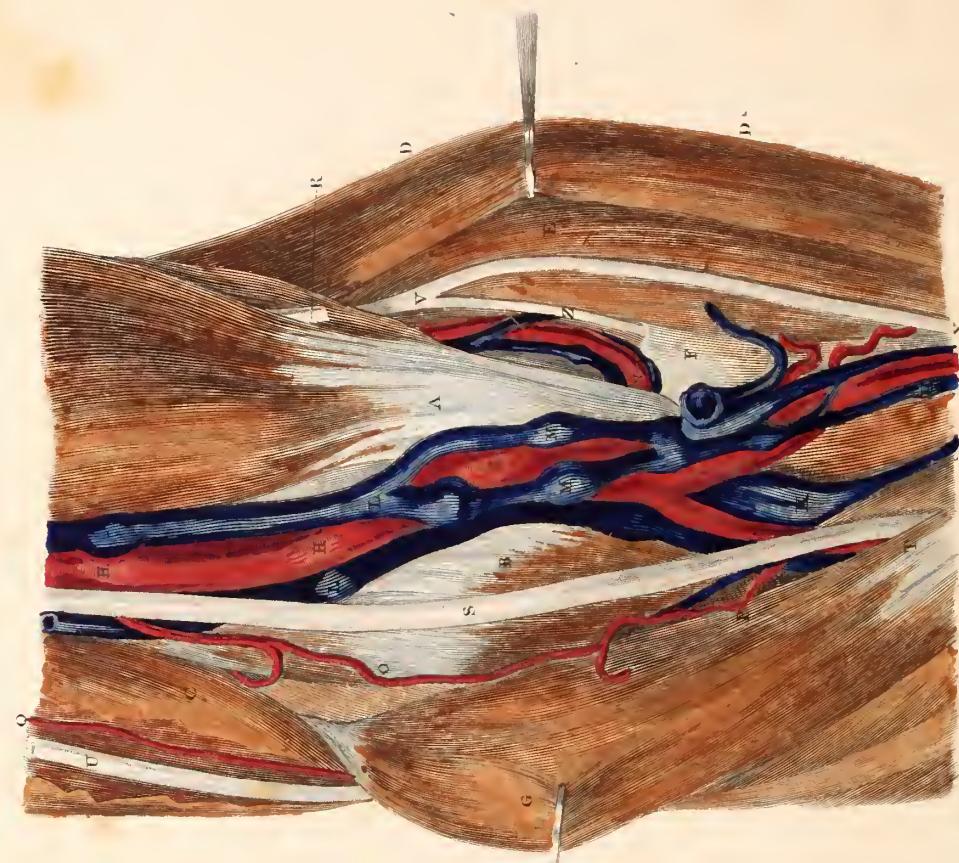


PLATE SEVENTH.

THE ANTERIOR ASPECT OF THE REGION OF THE ELBOW, IN WHICH THE VEINS HAVE BEEN STRONGLY INJECTED, TO SHOW, BY THEIR NODOSITIES, THE COMPARATIVE NUMBER OF VALVES IN THE SUPERFICIAL AND DEEP-SEATED VEINS.

FIGURE FIRST.

Superficial parts of the Bend of the Arm.

- A. A. The termination of the brachial aponeurosis.
- B. B. Commencement of the anti-brachial aponeurosis.
- C. Fibres of the brachial aponeurosis, which incline towards the bundle of muscles on the outside of the elbow.
- D. Oblique direction inwards of the greater part of the aponeurosis.
- E. Place where the tendon of the biceps is partially covered by a thin fibrous aponeurosis.
- F. The superficial radial vein, bound down in its small sheath.
- G. Fibrous expansion, detached from the biceps, passing to the internal part of the fascia.
- H. The inner condyle.
- I. The superficial radial vein.
- K. Cephalic vein.
- L. The anterior superficial ulnar vein.
- M. The posterior superficial ulnar vein.
- N. Origin of the basilic vein.
- O. The common median vein, very prominent, and enclosed in a small sheath.
- P. Venous branches which perforate the fascia, and which unite the deep-seated radial veins with the origin of the median cephalic and basilic.
- Q. The median basilic vein.
- R. The median cephalic vein.
- S. S. Brachial veins, seen through an aperture in the fascia of the elbow, purposely made to display them.
- T. T. T. Superficial abnormal veins.
- U. Internal cutaneous nerve, separating at the elbow into a considerable number of branches, entwining the median basilic, and basilic veins.
- V. Two branches of a cutaneous nerve, given off very high up by the ulnar nerve, sometimes by the brachial plexus.
- X. The external cutaneous, or musculo-cutaneous nerve, issuing from its deep position outside of the biceps, passing under the median cephalic vein, and slipping, without dividing itself, into the sheath of the median vein.
- Y. The brachial artery, seen between the two veins.

Z.

Small branch of the brachial, of which one branch remains subfascial, whilst the other becomes subcutaneous, a branch which appears to be the rudiment of the variety in which the ulnar artery passes superficially in this region.
Cutaneous branch of the radial nerve.

FIGURE SECOND.

Deep-seated Parts of the Bend of the Arm.

- A. Tendon of the biceps.
- B. Flattened tendon of the brachialis internus.
- C. Internal border of the triceps muscle.
- D. D. Supinator longus muscle.
- E. External radial muscles.
- F. Small supinator muscle, presenting an aperture perforated by the dorsal branch of the radial nerve.
- G. Round pronator muscle, and bundle of muscles on the inner side of the elbow.
- H. H. H. Brachial artery, situated on the outer side of the median nerve, and entwined by its veins.
- I. I. I. Origins of the radial and ulnar arteries
- K. K. Deep-seated radial and ulnar veins.
- L. L. Brachial veins.
- M. M. Radial veins, surrounding a portion of the brachial artery.
- N. Origin of the anterior recurrent of the epicondyle, which passes at this point under the tendon of the biceps. It is not, in this case, its usual course.
- O. P. Anterior arterial arch of the inner condyle, formed by the two following branches.
- O. Internal collateral artery of the arm.
- P. Anterior recurrent ulnar artery.
- Q. Artery, with the ulnar nerve, passing behind the inner condyle.
- R. Divided trunk of the musculo-cutaneous nerve.
- S. Median nerve, drawn a little to the inner side.
- T. Place where the median nerve passes between the two bundles of the round pronator muscles.
- U. Ulnar nerve.
- V. Radial nerve, dividing into two branches, viz.
- X. Anterior branch,
- Z. Posterior branch, disappearing under the short supinator muscle.

PLATE EIGHTH.

THE FINGERS.

FIGURE FIRST.

ANTERIOR ASPECT OF THE FINGERS.

No. 1.—*Exterior Surface of the Finger.*

- A. Line of the last phalangian articulation.
- B. Line of the first phalangian articulation.
- C. Line of the metacarpo-phalangian articulation.

No. 2.—*Skeleton of the Finger.*

- D. E. Lateral articular ligaments.
- F. Anterior ligaments, passing over the sesamoid bones.

No. 3.—*Sheath of the Flexor Tendons, laid open to show the Tendons.*

- G. Tendon of the flexor digitorum sublimis.
- H. Tendon of the flexor digitorum profundus.
- I. Situation where the flexor tendon becomes flat, afterwards separating into two bundles, the tendon of the flexor profundus passing between them.
- K. Cut border of the sheath.
- L. The artery and nerve in their natural positions—the nerve lying on the inner side.

No. 4.—*View, with the Sheath entire.*

- M. Anterior aspect of the sheath.
- N. N. Origin and termination of the sheath.
- O. O. Situations where the fibrous membrane of the sheath forms crucial bands.
- P. P. Rounded openings in the sheath for the transmission of blood-vessels, and situated over the metacarpo-phalangian articulation.
- Q. Situations where the sheath is wanting, showing the naked tendon of the flexor profundus.
- R. Trunks of the arteries.
- S. Artery and nerve;—the nerve is seen outside of the artery, in consequence of the reflection of the integuments.
- T. Arch formed by the artery on the last phalanx, and the non-formation of the arch by the corresponding nerve.

No. 5.—*Veins of the Finger.*

- U. Venous branch, by which the anterior plexus of veins of the finger communicate with those of the palm of the hand.
- X. X. X. Venous branches situated over the lines of articulation, and communicating laterally with the digital plexus.

FIGURE SECOND.

POSTERIOR ASPECT OF THE FINGERS.

No. 1.—*Exterior Surface of the Finger.*

- A. B. C. Line of the phalangian and metacarpo-phalangian articulations.

No. 2.—*Skeleton of the Finger.*

- D. E. Digital articulations deprived of their posterior

ligaments, and showing one of their lateral ligaments.

No. 3.—*Fibrous Membrane of the Extensor Tendons of the Fingers.*

- F. Extensor tendon, contracted at the metacarpo-phalangian articulation.
- G. Situation where the extensor tendon divides into three bundles, viz.—
- H. Middle phalangian bundle,
- I. I. I. Lateral phalangettian bundles, which afterwards reunite,
- K. K. Tendons of the lumbricales and interossei muscles.

No. 4.—*Vessels and Nerves.*

- L. L. L. Arterial branches, directed obliquely backwards over the lines of the digital articulations.
- M. Arterial arch at the root of the nail, into which it sends many ramifications.
- O. P. Corresponding nerves, among which, for this finger especially, are O. from the radial, and P. from the dorsal branch of the ulnar nerve.
- Q. Q. Q. Venous trunks coming from the fingers, and forming the venous arch of the back of the hand.
- R. Tendinous expansion, which unites the two extensor tendons.

No. 5.—*Plexus of Veins.*

- X. X. X. Branches communicating laterally with the veins on the anterior aspect of the finger.

FIGURE THIRD.

PERPENDICULAR AND LONGITUDINAL SECTION OF THE LAST PHALANX, TO SHOW THE ROOT OF THE NAIL.

- a. Section of the bone.
- b. Anterior ligament of the last phalangian articulation, in which will be observed a sesamoid bone.
- c. Termination of the phalangettian extensor tendon.
- d. e. e. Termination of the phalangettian flexor tendon.
- f. The skin on the anterior and posterior surfaces of the finger.
- f. Cavity, formed by the reflection of the skin, in which is seen the root of the nail.
- g. Point where the reflection of the skin commences on the back of the nail.
- h. The nail.
- i. Cellular tissue of the pulp of the finger.
- k. Tendinous fibres which connect the skin at the extremity of the finger with the anterior surface of the bone.

FIGURE FOURTH.

LATERAL VIEW OF THE FINGER, BENT AT THE DIFFERENT ARTICULATIONS, TO SHOW, IN THAT POSITION, THE LINES OF THE ARTICULATIONS A. B. C.

Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.



Fig. 5.





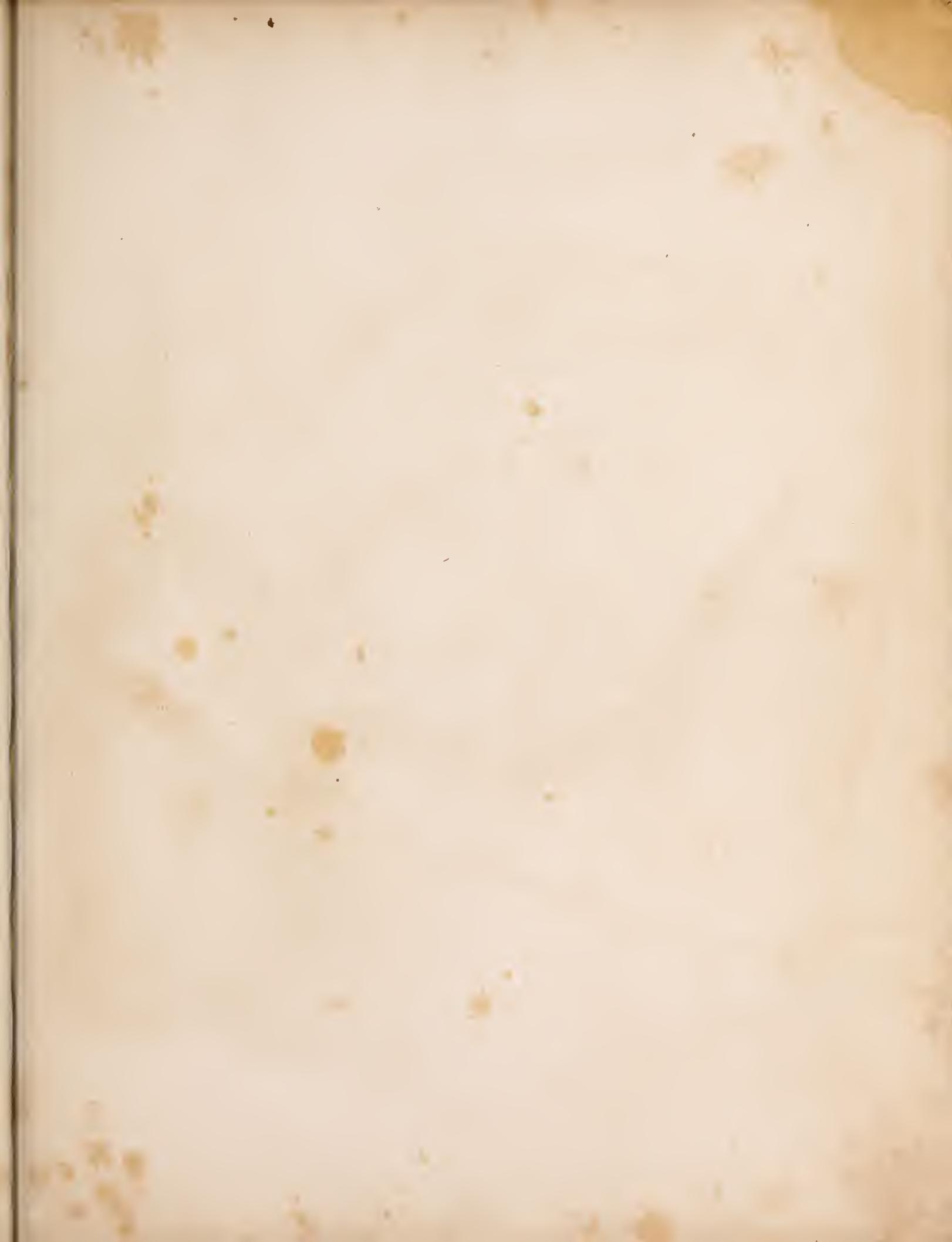


PLATE IX.

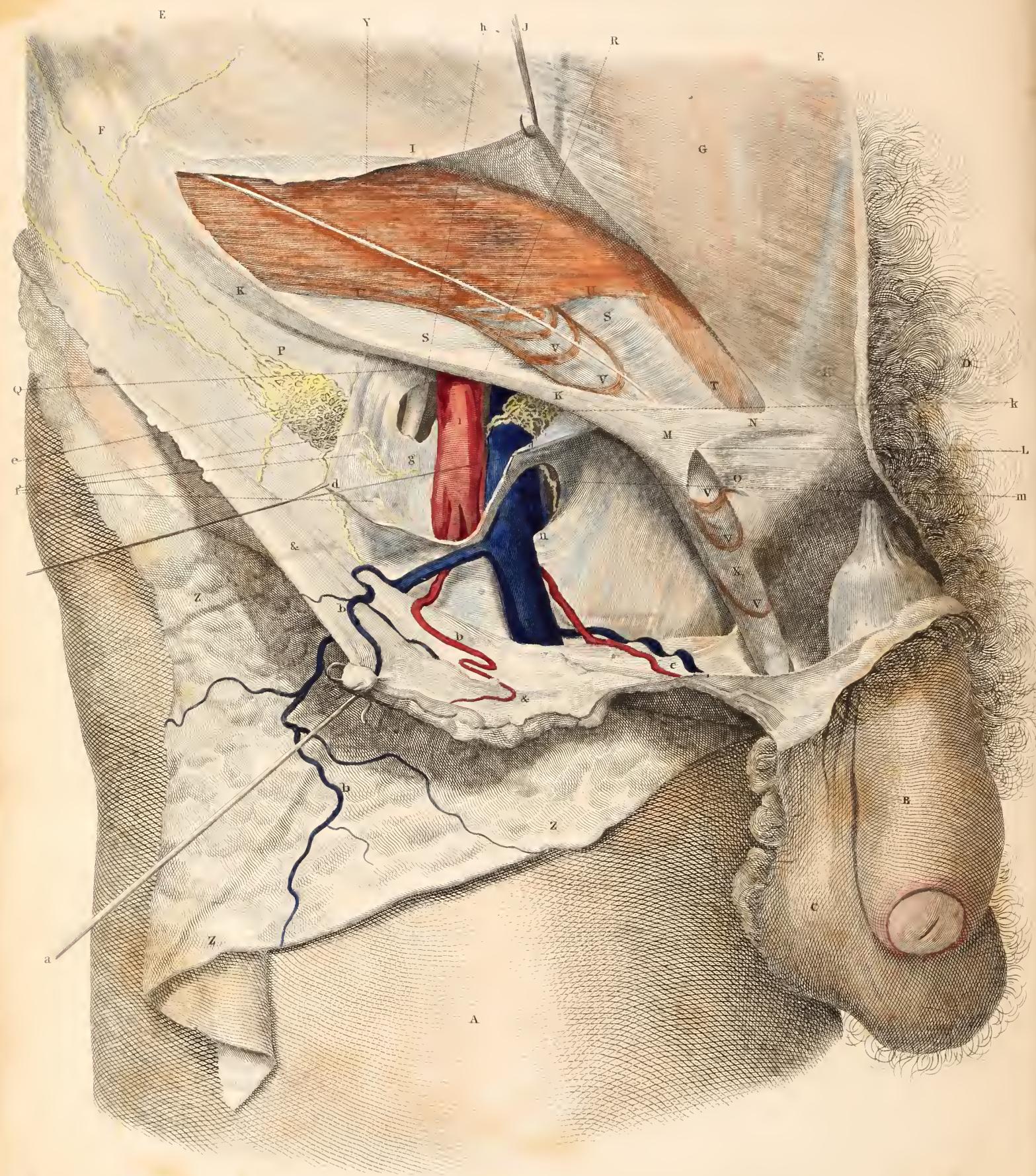


PLATE NINTH.

INGUINAL AND CRURAL CANALS, SEEN EXTERIORLY.

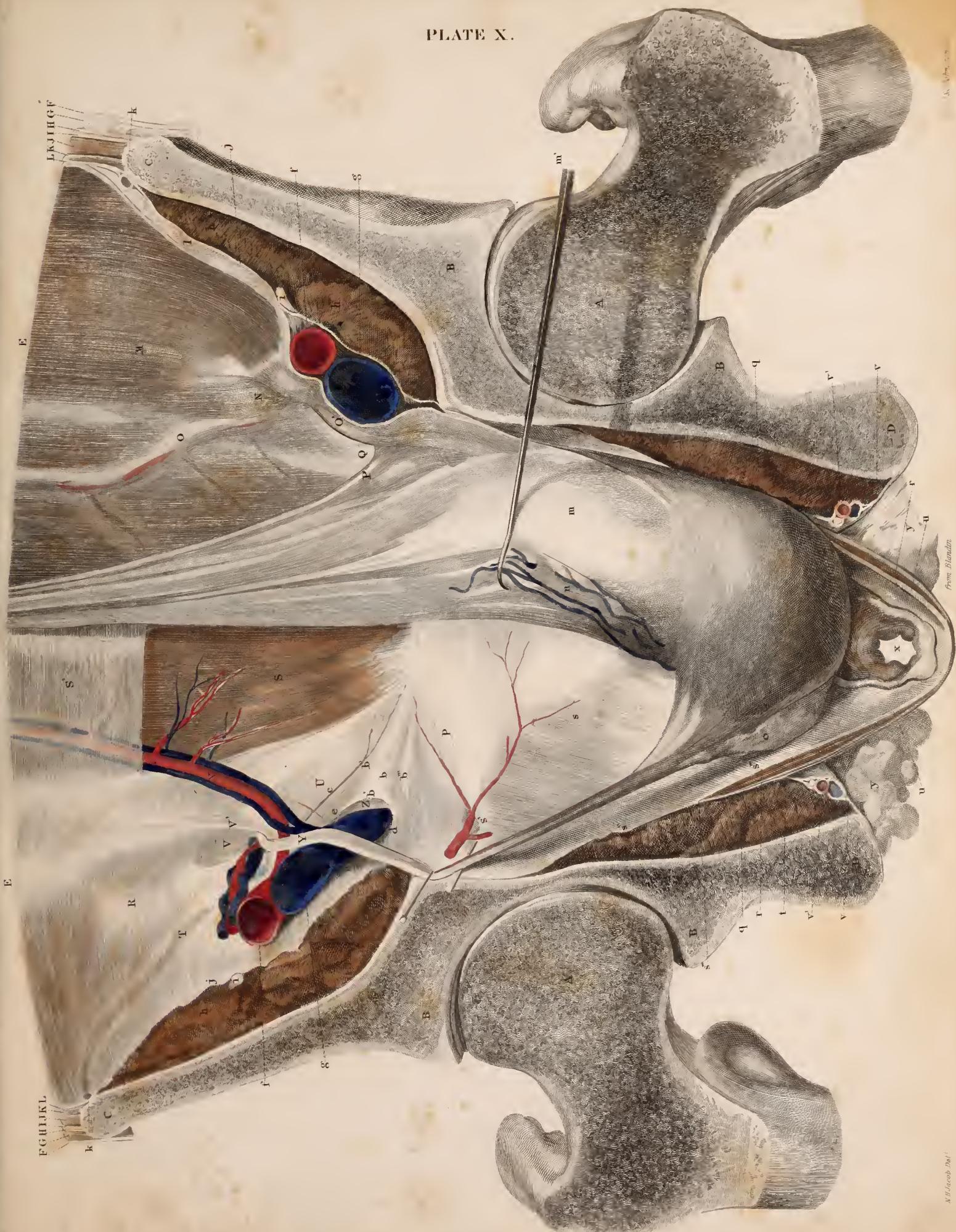
| | | |
|-------|---|---|
| A. | Portion of the thigh. | V. V. V. V. V. Loops of the cremaster muscle, formed by prolongations on the cord from the inferior border of the internal oblique and transversalis muscles. |
| B. | Penis. | X. Spermatic cord. |
| C. | Scrotum. | Y. Ilio-sacral nerve of the lumbar plexus. |
| D. | Hair of the pubes. | Z. Z. Z. Skin and adipose tissue of the parietes of the abdomen reflected downwards. |
| E. E. | Portion of the anterior parietes of the abdomen. | & &. Aponevrosis of the fascia superficialis. |
| F. | Anterior and superior spinous process of the ilium. | a. Cord knitted to the aponevrosis of the fascia superficialis, detached from the parietes of the abdomen, and reflected upon the thigh and hip. |
| G. | Rectus muscle in its sheath. | b. b. b. Vessels of the integuments of the abdomen. |
| H. | Pyramidal muscle, also in its sheath. | c. External superficial vessels of the genitals. |
| I. | Aponeurosis of the external oblique. | d. d. Anterior parietes of the crural canal, incised and reflected from within outwards to show the canal. |
| J. | Hook raising a portion of the fascia of the external oblique, detached above from the crural arch in the situation where it forms the anterior of the inguinal canal. | e. Large lymphatic ganglion situated over the crural canal. |
| K. K. | Crural arch. | f. Openings of the anterior parietes of the crural canal, which are traversed by the lymphatic vessels. |
| L. | Inguinal ring traversed by the spermatic cord, and giving off from its margin a fibrous expansion to the cord. | g. External parietes of the crural canal formed by the deep fibres of the fascia lata, supported upon the psoas and iliacus internus muscles. |
| M. | Fibrous expansion detached from the margin of the inguinal ring. | h. Opening made at the external part of the crural canal, to show the crural nerve, situated immediately behind it in the sheath of the psoas muscle. |
| N. | Internal or superior pillar of the ring. | i. Femoral artery lying on the outer side of the femoral vein. |
| O. | External or inferior pillar of the ring. | j. Femoral vein. |
| P. | Situation where the crural arch connects itself with the whole thickness of the fascia lata. | k. Lymphatic ganglion in the internal part of the superior opening of the crural canal. |
| Q. | Situation where the crural arch adheres only to the superficial fibres of the aponeurosis of the fascia lata, fibres which are here detached and turned outwards. | l. Internal saphena vein. |
| R. | Passage opened above, which forms the crural arch, and which, in continuing itself backwards and upwards with the fascia transversalis, forms the passage which constitutes the inguinal canal. | m. Inferior opening of the crural canal, crossed by the internal saphena vein. |
| S. S. | Aponevrosis of the fascia transversalis, which forms the posterior wall of the inguinal canal in a situation where, of the three muscles of the abdomen, we find only the external oblique. | n. Falciform bundle of fibres, situated at the junction of the saphena and femoral veins. |
| T. | Situation where the fascia transversalis arises from the external border of the rectus. | |
| U. U. | Inferior conjoined and horizontal edges of the internal oblique and transversalis muscles. | |

PLATE TENTH.

POSTERIOR VIEW OF THE ANTERIOR ABDOMINAL PARIES, TO SHOW THE SUPERIOR ORIFICES OF THE INGUINAL AND CRURAL CANALS; AND ALSO A PERPENDICULAR AND TRANSVERSE SECTION OF THE PELVIS, TO SHOW THE INTERNAL ILIAC REGION AND THE CONNEXION OF THE PERINEAL APONEUROSIS WITH THE APONEUROSES OF THE CAVITY OF THE PELVIS.

| | | | |
|-------------|--|-------------|---|
| A. A. | Section of the upper part of the femur. | b". | Portion of the ligament adhering to the crural arch. |
| B. B. B. B. | Perpendicular section of the iliac bones, from the anterior and superior spine of the ilium to the tuberosities of the ischium. | b'". | Portion of the ligament adhering to the crest of the pubis. |
| C. C. | Anterior and superior spines of the ilium. | c. | Branch of the epigastric artery passing a little above Gimbernat's ligament. |
| D. D. | Tuberossities of the ischia. | d. | Posterior side of the superior orifice of the crural canal, formed by the ascending ramus of the pubis. |
| E. E. | Inferior portion of the anterior abdominal paries, formed by | e. | Anterior side of the superior orifice of the crural canal, formed by the crural arch, on the level of the inguinal canal. |
| F. F. | The skin, | f. f. | External iliac artery situated opposite the external paries of the superior orifice of the inguinal canal, and giving off the epigastric and circumflex iliac arteries. |
| G. G. | Subcutaneous cellular tissue, | g. g. | External iliac vein giving off the two epigastric veins. |
| H. H. | Fascia superficialis, | h. h. h. h. | The external iliac and psoas muscles united. |
| I. I. | Aponeurosis of the external oblique muscle, | i. i. | Crural nerve. |
| J. J. | Internal oblique muscle, | j. j. | Aponeurosis of the iliac fascia. |
| K. K. | Transversalis muscle, | k. k. | External iliac artery enclosed in a small sheath formed by the junction of the iliac and transversalis fascie. |
| L. L. | Transversalis fascia, very thin. | l. | Cellular tissue under the peritonium of the right internal iliac fossa. |
| M. | Right side of the anterior abdominal paries on which the peritoneum still remains. | m. | The bladder drawn to the right, and falling a little down from its wanting the support of the rectum. |
| N. | Place where the peritoneum in the fetus forces itself within the inguinal canal, and where, in the adult, it presents a wrinkled cicatrix. | m'. | Hook applied to the bladder. |
| O. | Tract of the epigastric vessels, | n. | Plexus of the vesical veins. |
| O'. | Tract of the vas deferens. | o. | Seminal vesicle of the left side joined to the vas deferens. |
| P. | Projection of the umbilical artery. | p. | Ascending ramus of the pubis. |
| Q. | Inguinal fossa outside of the peritoneum. | q. q. | Internal obturator muscles. |
| R. | Left side of the anterior abdominal paries, on which, the peritoneum having been removed, we see distinctly the fascia transversalis. | r. r. | The levator muscles of the anus. |
| S. | Situation where the posterior part of the sheath of the rectus muscle is wanting. | s. | Pelvic fascia. |
| S'. | Place where the sheath of the rectus muscle is complete. | s'. | Obturator hole traversed by its vessels and nerves. |
| T. | Place where the aponeurosis of the fascia transversalis accompanies the aponeurosis of the iliac fascia, behind the circumflex iliac artery, of which we see the tract. | s'". | Place where the pelvic fascia lies upon the internal obturator muscle. |
| U. | Place where the aponeurosis of the fascia transversalis forms the posterior part of the inguinal canal, and goes to unite itself to the outer side of the tendon of the rectus muscle. | s'". | Place where the pelvic fascia lies upon the levator muscle of the anus. |
| V. | Upper orifice of the inguinal canal formed by the transversalis fascia, in the middle of which this last aponeurosis becomes funnel-shaped in the inguinal canal. | s'''. | Place where the pelvic fascia, on its external aspect, gives off a fibrous expansion which descends between the two last muscles. |
| V'. | Bundle of fibres which form the lower and inner portion of the superior orifice of the inguinal canal. | t. | Place where the aponeurosis which covers the internal aspect of the internal obturator muscle divides into two layers, viz. |
| X. | Epigastric artery with its two veins placed within the superior orifice of the inguinal canal, first under the peritoneum, afterwards entering the sheath of the rectus muscle. | u. u. | Fibrous layer, which covers the inferior aspect of the levator anus. |
| Y. | The vas deferens, reflecting itself at an acute angle on the inferior part of the superior orifice of the inguinal canal, and on the epigastric vessels. | v. v. | Fibrous layer, which descends on the internal aspect of the internal obturator muscle, to attach itself to the tuberosity of the ischium. |
| Y'. | The spermatic artery with its two veins passing through the inguinal canal. | v' v'. | Pudic vessels and nerves enclosed in a small sheath formed by the preceding aponeurosis. |
| Z. | Superior orifice of the crural canal, formed on the outer side by | x. | Anus and inferior part of the rectum, embraced by the superior and inferior aponeuroses and the levator muscle of the anus. |
| a. | The aponeurosis of the iliac fascia, and on the inner side by | y. y. | Fatty cushion placed between the anus and the tuberosity of the ischium in an aponeurotic angle, formed partly by the aponeurosis of the internal obturator muscle, and partly by that which covers the lower part of the levator muscle of the anus. |
| b. | Gimbernat's ligament. | | |
| b'. | Falciform edge of Gimbernat's ligament. | | |

PLATE X.





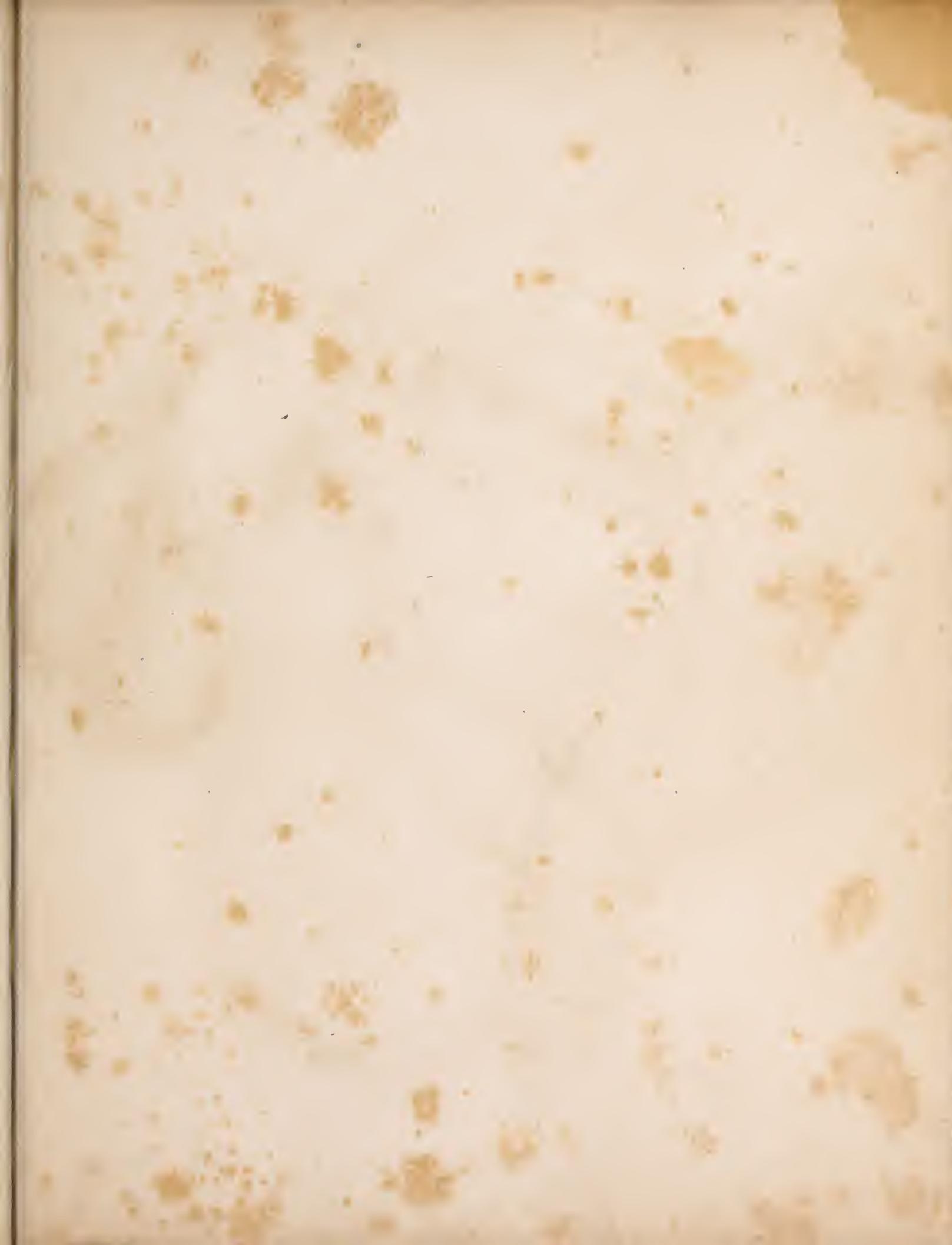


PLATE XI



PLATE ELEVENTH.

INTERIOR OF THE PERINEUM AND CAVITY OF THE PELVIS, TO SHOW THE PELVIC APONEUROSIS.

| | | | |
|-------|---|-------|--|
| A. | Section of the pubes, a little to the outer side of the symphysis. | a. | Cord of the umbilical artery. |
| B. B. | Lateral section of the sacrum and last lumbar vertebrae. | b. b. | Vesical arteries. |
| C. | Bundles of lumbar and sacral nerves enclosed in the spinal canal. | c. | End of the inferior vena cava. |
| D. D. | Section of the spine of the sacrum. | d. | Left common iliac vein. |
| E. | Last intervertebral ligament. | e. | External iliac vein. |
| F. F. | Fleshy mass of the sacro-spinal muscles. | f. | Cut trunk of the internal iliac or hypogastric vein. |
| G. | Aponeurosis of the sacro-spinal muscles. | g. | One of the branches of the obturator vein ending in the external iliac, at the middle of the crural arch, a distribution very common, if not constant. |
| H. | Aponeurosis of the longissimus dorsi united to the posterior fibres of that of the transversalis. | h. | The rectum thrown outwards. |
| I. I. | Subcutaneous tissue. | i. | The bladder also thrown outwards. |
| J. | The skin. | j. | The left seminal vesicle. |
| K. | Penis. | k. | The prostate gland seen covered by a prolongation of the pelvic aponeurosis which forms its sheath. |
| L. | Scrotum. | l. | Superior perineal aponeurosis. |
| M. | Hair of the pubes. | m. | Pubo-prostatic ligament formed by the superior perineal aponeurosis. |
| N. | Hook applied to the rectus muscle. | n. | Notch for the passage of veins. |
| O. | Epigastric artery. | o. o. | Arch of the levators of the anus, formed by the superior perineal aponeurosis, and giving rise to the lesser perineal aponeurosis. |
| P. P. | Crest of the ilium. | p. | Obturator hole. |
| Q. | Iliac muscle. | q. | Obturator nerve. |
| R. | Psoas magnus muscle. | r. | Sacro-sciatic notch, in which we observe the gluteal artery, and near to which we find the gluteal nerve. |
| S. | Tendon of the psoas minimus muscle. | s. | Sciatic notch, traversed by the sciatic and internal pudic arteries. |
| T. | End of the aorta. | | |
| U. | Left common iliac artery. | | |
| V. | External iliac artery. | | |
| X. | Internal iliac or hypogastric artery. | | |
| Y. | Obturator artery. | | |
| Z. | Gluteal artery. | | |
| &. | Sciatic and internal pudic arteries. | | |

PLATE TWELFTH.

FIGURE FIRST.

Crural Hernial Sac removed, to show the hole by which it descends in the Female.

A. Seat of the pubis.
 B. Crural arch extending towards the ilium.
 C. C. Abdominal muscles.
 D. Crural arch.
 E. Fascia lata.
 F. Semilunar edge of the fascia lata.
 G. Third insertion of the external oblique.
 H. Crural artery.
 I. Crural vein.
 K. Crural sheath.
 L. Abdominal ring.
 M. The orifice by which the crural hernia descends, formed on the outer side by the crural sheath, on the inner by the semicircular insertion of the tendon of the external oblique, and above in part by the crural sheath and in part by the semilunar edge of the fascia lata. The division in the crural hernia is made at the upper and inner part.

FIGURE SECOND

Shows the Crural Sheath.

A. Pubis.
 B. Ilium.
 C. C. Abdominal muscles drawn up.
 D. Transversalis muscle.
 E. Its tendon.
 F. Seat of the posterior edge of the crural arch.
 G. G. Fascia transversalis.
 H. Inner portion of the same fascia.
 I. Fascia iliaca.
 K. Crural sheath.
 L. Crural artery.
 M. Crural vein.
 N. Saphena major vein.
 O. Anterior crural nerve.
 P. Fascia lata turned back.
 Q. Tendon of the external oblique muscle drawn down.

FIGURE THIRD.

Dissection of a Case of Inguinal Hernia, to show the Coverings of the Sac and relative situations of the Vessels.

A. A. Inguinal ring of the left side.

B. B. Tendinous bands, which cross the direction of the fibres of the aponeurosis of the external oblique near the inguinal ring.
 C. C. C. Aponeurosis of the external oblique muscle of the abdomen, cut from the crest of the ilium, from the linea alba, and from the vicinity of the inguinal ring.
 D. Crural arch of the left side.
 E. E. Aponeurotic and membranous sheath, formed by the cremaster muscle, laid open; the borders of the opening are held asunder by two hooks.
 F. Continuation of the sheath formed by the cremaster muscle, in which are enclosed the spermatic cord and tunica vaginalis of the testicle.
 G. G. Fleshy fibres of the cremaster muscle.
 H. H. Cellular tissue, soft and pliant, which forms an intermediate cushion between the cremaster muscle and hernial sac.
 I. I. Hernial sac formed by the peritoncum.
 K. K. Portion of the omentum contained in the hernial sac.
 L. L. Sheath of the rectus muscle of the left side opened and reflected.
 M. Portion of the great peritoneal sac, the transparency of which permits us to distinguish the convolutions of the intestines.
 N. The rectus-muscle of the left side reflected on the right side of the abdomen.
 O. The internal oblique muscle of the left side.
 P. Portion of the great peritoneal sac appearing under the crural arch of the left side, after having separated the aponeurosis of the fascia lata, and elevated the Fallopian ligament.
 Q. Skin of the scrotum.
 R. Femoral artery.
 S. Femoral vein.
 T. Anterior iliac artery.
 U. Origin of the epigastric artery.
 V. V. Tract of the epigastric artery of the left side, along the rectus muscle, after having passed behind the hernial sac.
 X. Origin of the epigastric vein.
 Y. Y. Tract of the epigastric vein behind the neck of the hernial sac, and along the rectus muscle.
 Z. Saphena vein.
 a. Anterior crural nerve.
 b. Curved dotted line, which indicates the direction followed by the viscera in passing through the canal, to form the external inguinal hernia, which is the more common.
 c. Gluteus medius muscle.
 d. Fascia lata.
 e. Sartorius muscle.
 f. Rectus muscle.
 g. Vastus externus muscle.
 h. Iliacus internus muscle.
 i. Tendon of the adductor muscles of the thigh.
 j. Gracilis muscle.

Fig. 1.



Fig. 2.



Fig. 3.

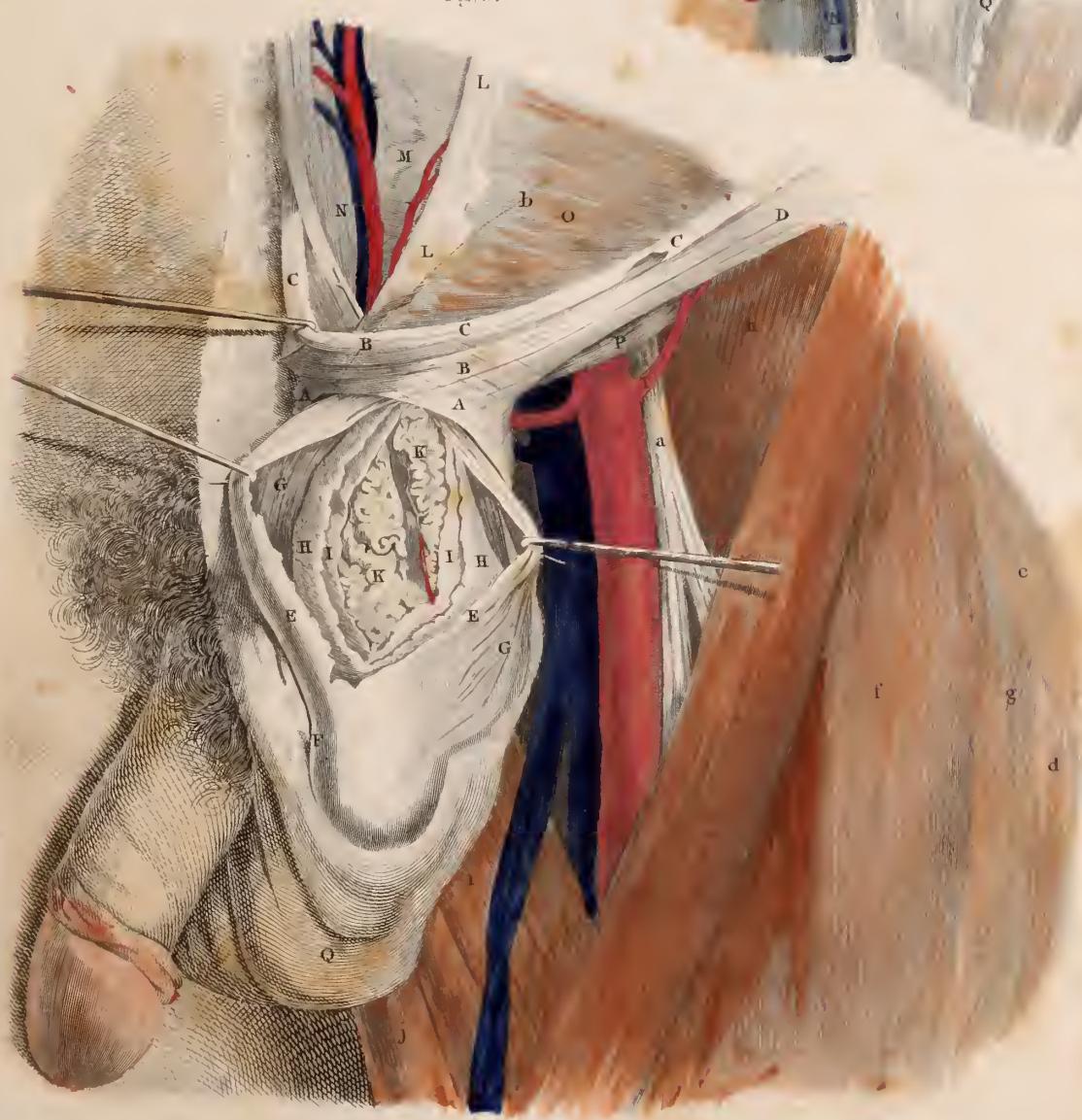






PLATE XIII.

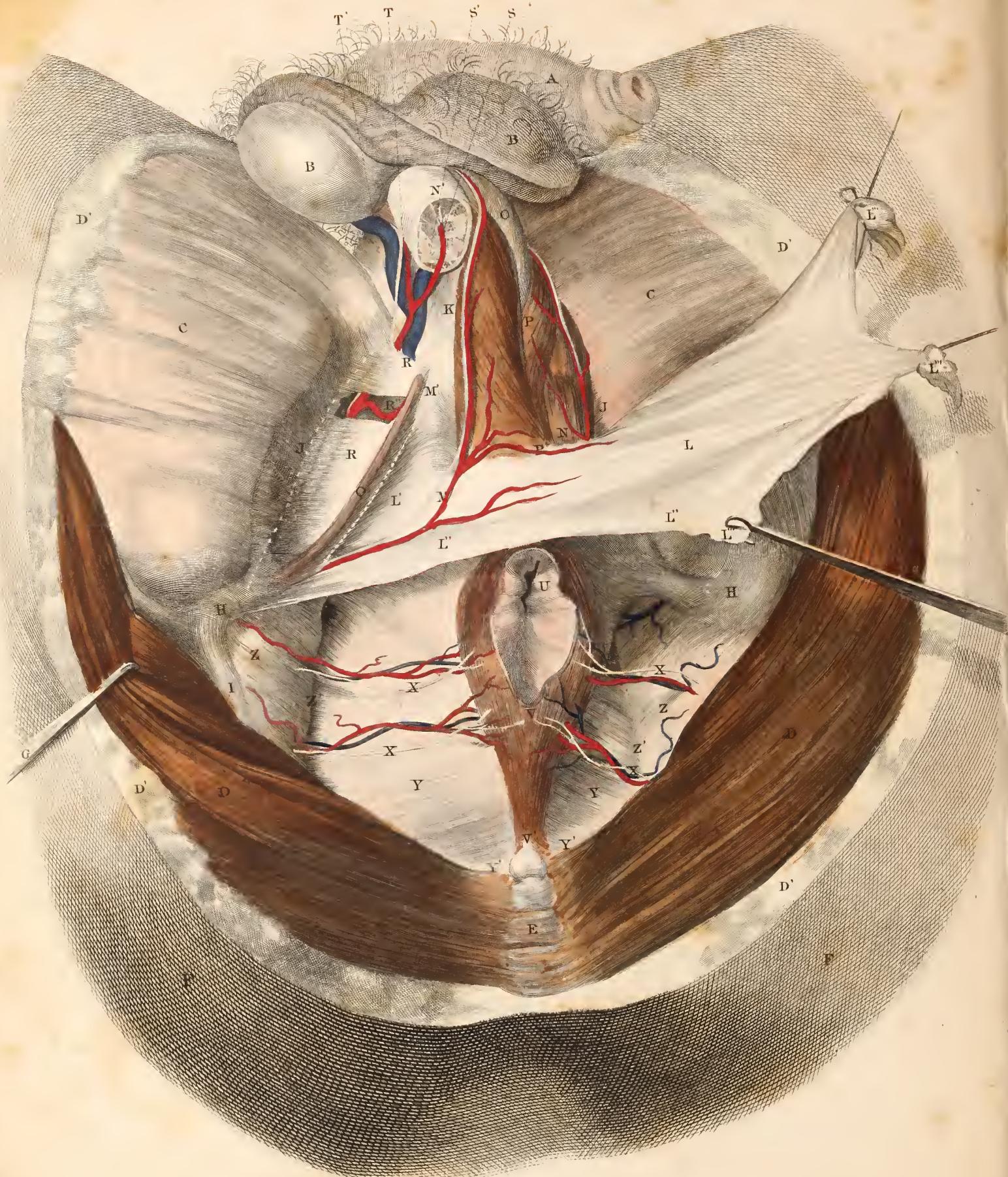


PLATE THIRTEENTH.

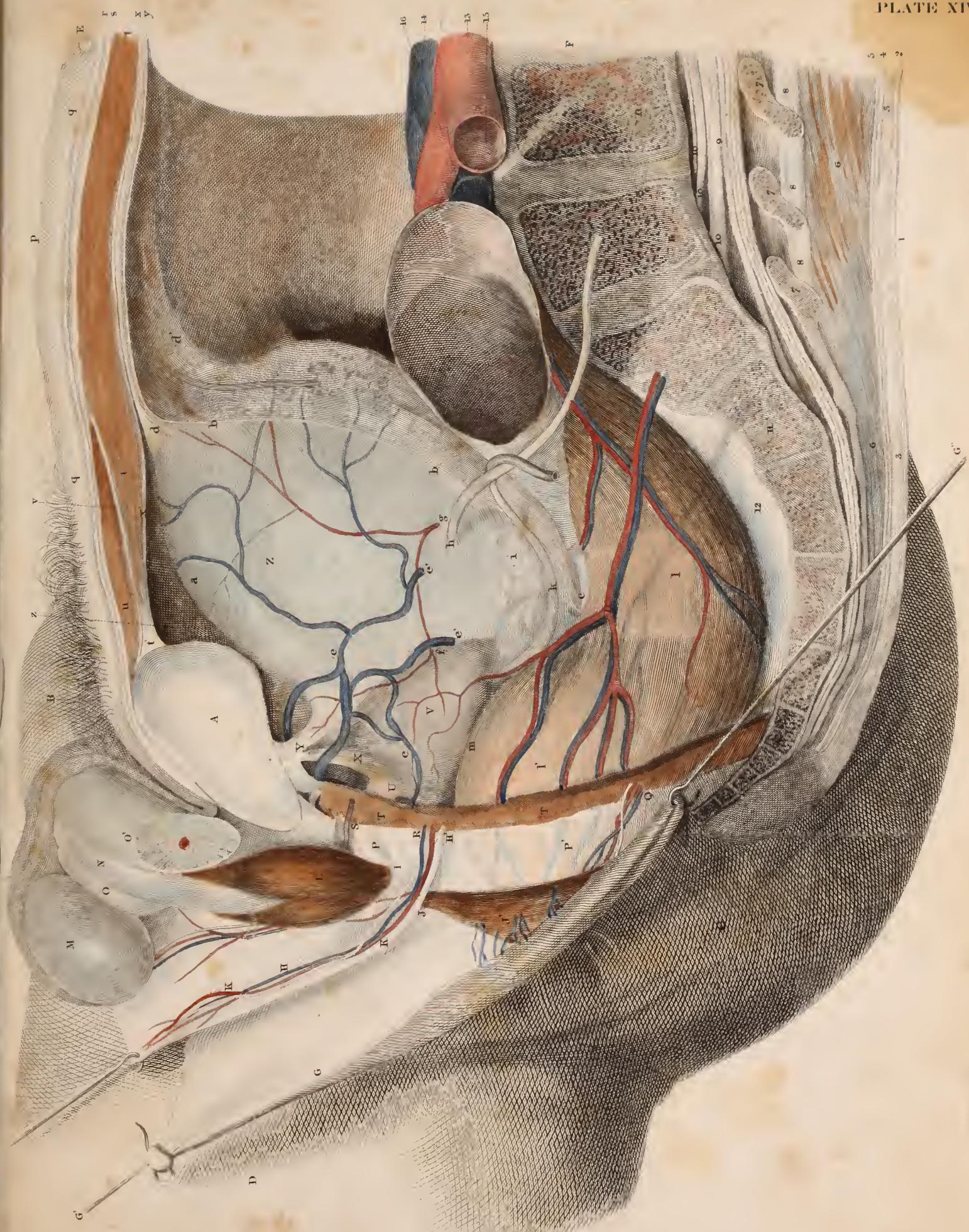
VIEW OF THE PERINEUM IN THE MALE.

| | | | |
|-------------------|--|-------------|--|
| A. | Penis. | Q. | Transverse muscle of the perineum proceeding obliquely in front to the bulb of the urethra. |
| B. B. | Testicles and their envelopes. | R. | Anterior portion of the middle perineal aponeurosis. |
| C. C. | Portion of the inner sides of the thighs, on which the aponeurosis is exposed. | R'. | Notch below the symphysis of the pubes, formed in part by the middle perineal aponeurosis, and giving passage to the vein, arteries, and nerve of the dorsum of the penis. |
| D. D. | Portion of the glutæus maximus muscle. | R''. | Notch formed purposely in the middle perineal aponeurosis, to show, above it, the superior branch of the internal pudic artery, and the transverse artery of the perineum. |
| D'. D'. D'. D'. | Section of the skin and subcutaneous cellular tissue. | S. | Artery of the cavernous body. |
| E. | Coccyx. | S'. | Cavernous body. |
| F. F. | Portion of the skin of the buttock. | T. | Artery and nerve of the dorsum of the penis. |
| G. | Hook applied to the glutæus maximus muscle of the right side, to show the subjacent parts. | T'. | Vein of the dorsum of the penis proceeding towards the notch R', of the middle perineal aponeurosis. |
| H. H. | Tuberousities of the ischia. | U. | Anus. |
| I. | Portion of the right great sacro-sciatic ligament. | V. | Sphincter of the anus. |
| J. J. | Rami of the pubes. | V'. | Coccygean extremity of the sphincter of the anus. |
| K. | Symphysis of the pubes. | X. X. X. X. | Inferior hemorrhoidal vessels and nerves. |
| L. | Inferior or superficial aponeurosis of the perineum, detached in front and on the sides, drawn down, twisted on its base, and thrown to the left. | Y. Y. | Posterior portion of the middle perineal aponeurosis. |
| L'. | Place where the inferior perineal aponeurosis connects itself with the middle (R). | Y'. Y' | Place where some fibres of the glutæus maximus take their origin from the preceding aponeurosis. |
| L'', L''. | Lateral border of the inferior aponeurosis of the perineum, which was attached to the corresponding ramus of the arch of the pubes at the middle of the dotted line J. | Z. Z. | Pelvic aponeurosis, lying on the internal aspect of the internal obturator muscle. |
| L''', L''', L'''. | Threads and hook applied on the anterior part of the inferior perineal aponeurosis. | Z. Z'. | Angular sinus, formed by the reunion above of the preceding aponeurosis of the internal obturator muscle, and of the posterior portion of the middle aponeurosis. The sinus is crossed by the inferior hemorrhoidal vessels and nerves X. X. X. X. and filled in the fresh state by a fatty cushion. |
| M. | Superficial artery and nerve of the perineum close to the inferior perineal aponeurosis, and displaced by the drawing out of the aponeurosis. | | |
| M'. | Dotted line indicating the natural position of these vessels and nerves. | | |
| N. | Cavernous body, with erector penis muscle. | | |
| N'. | Cavernous body cut across, and penetrated in the centre by its vessels. | | |
| O. | Spongy portion of the urethra. | | |
| P. | Accelerators urinæ muscles. | | |
| P'. | Posterior insertion of the muscle on the superior aspect of the inferior perineal aponeurosis. | | |

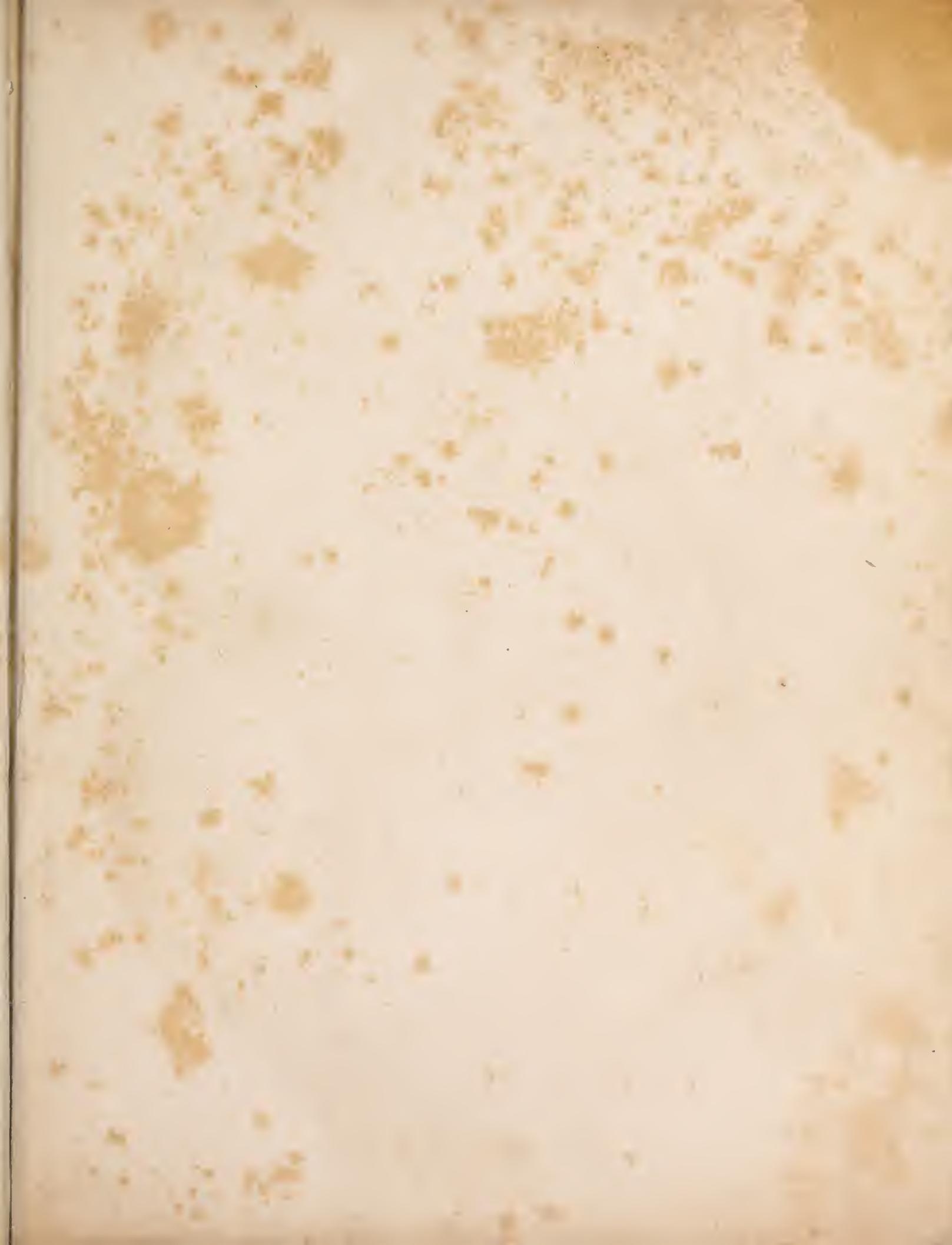
PLATE FOURTEENTH.

SECTION PARALLEL TO THE AXIS OF THE BODY; OF THE PERINEUM OF THE PELVIC PORTION OF THE ANTERIOR ABDOMINAL pariетes, AND OF THE POSTERIOR SACRAL REGION; MADE A LITTLE TO THE OUTER SIDE OF THE MESIAL LINE.

| | | | | |
|--------|---|-------------|--|--|
| A. | Symphysis of the pubes. | | | branches, which terminate in the hypogastric vein. |
| B. | Penis, lying upon the belly. | | | Vesico-prostatic arterial branches. |
| C. | Buttock. | | | Vesical artery. |
| D. | Thigh. | | | Ureter crossed superiorly and on the inner side of the vas deferens. |
| E. | Umbilicus. | | | Spermatic vesicle slightly raised. |
| F. | Section of the inferior part of the spine. | | | Vas deferens below and on the inner side of the corresponding vesicle. |
| G. | Skin and subcutaneous tissue of the perineum. | | | Rectum, of which we see principally the part deprived of peritoneum and the longitudinal muscular fibres scattered uniformly upon its surface. |
| G'. | Cord attached in front to the skin of the perineum. | | | Inferior portion of the rectum, or anus. |
| G''. | Hook applied behind to the skin of the perineum. | | | Place where the rectum and prostate are united by condensed cellular substance. |
| H. | Superficial or inferior perineal aponeurosis. | | | Lesser hemorrhoidal vessels. |
| H'. | Posterior border of the inferior perineal aponeurosis, continuous with the inferior aspect of the middle aponeurosis. | | | Superior hemorrhoidal vessels, branches of the inferior mesenteric vessels. |
| I. | Place where the accelerator urinæ muscle inserts itself on the superior aspect of the inferior perineal aponeurosis. | | | Hypogastric portion of the anterior abdominal pariетes, which comprehends, |
| J. | Place where the sphincter muscle of the anus inserts itself on the inferior aspect of the inferior perineal aponeurosis. | | | The skin, |
| J'. | Sphincter muscle crossed by small hemorrhoidal veins. | | | Aponeurosis of the fascia superficialis, |
| K. K. | Superficial vessels and nerves of the perineum. | | | Anterior portion of the sheath of the rectus muscle, |
| L. | Accelerator urinæ muscle. | | | Rectus muscle, |
| M. | Right testicle exposed. | | | Tendon of the rectus muscle, |
| N. | Urethra. | | | Pyramidalis muscle enclosed in a small sheath, formed by a redoubling of the anterior part of the sheath of the rectus muscle, |
| O. | Root of the cavernous body untouched. | | | Aponeurotic fibres, sometimes wanting, which, when they exist, separate the rectus and pyramidalis muscles, |
| O'. | Root of the cavernous body divided. | | | Posterior portion of the sheath of the rectus, |
| P. | Anterior portion of the middle perineal aponeurosis. | | | Place where the posterior part of that sheath is wanting, the rectus muscle coming in contact with the peritoneum, or the bladder, according to circumstances, |
| P'. | Posterior portion of the middle perineal aponeurosis, inferior at this point. | | | Peritoneum lining the anterior abdominal pariетes, and reflecting itself below upon the bladder, |
| Q. | Inferior hemorrhoidal vessels and nerves. | | | Space where the bladder, deprived of peritoneum, comes in contact with the anterior abdominal pariетes. |
| R. | Origin of the superficial vessels and nerves of the perineum. | | | Posterior sacral region, which comprehends, |
| S. | Transverse artery of the perineum, cut at its origin, and visible as far as the bulb, in consequence of a slit in the middle perineal aponeurosis, which is entire below. | | | The skin, |
| T. T. | Levator muscle of the anus. | | | Subcutaneous cellular substance, |
| U. | Origin of the membranous portion of the urethra. | | | Aponeurosis, formed by the union of the great dorsal aponeurosis and the posterior fibres of the aponeurosis of the transverse muscle of the abdomen, |
| V. | Prostate. | | | Aponeurosis of the sacro-spinalis muscle, |
| X. | Triangular fleshy fibres, which arise from the pubes under the pubo-prostatic ligaments, embracing laterally the urethra and prostate, on the envelope of which the fibres terminate. | | | Origin of the sacro-spinalis, common mass of the sacro-lumbalis, and longissimus dorsi muscles. |
| Y. | Pubo-prostatic ligament. | | | Section of the processes of the vertebrae and sacrum. |
| Z. | Bladder. | | | Intervertebral ligaments. |
| a. | Anterior aspect of the bladder where the peritoneum is wanting, and which comes in contact with the pubes and with the abdominal pariетes when the bladder is much distended. | | | Bundles of lumbar and sacral nerves. |
| b. b. | Cut edge of the peritoneum, which covers the posterior, and a part of the superior and inferior aspects of the bladder. | | | Apertures for the passage of the spinal nerves. |
| c. | The bottom of the recto-vesical depression of the peritoneum, about two inches and a half distant from the surface of the skin. | | | Sections of the bodies of the vertebrae and sacrum. |
| d. | Urachus, arising from the summit of the bladder, and slipping under the peritoneum of the anterior abdominal pariетes. | | | Cellular tissue which unites the rectum to the anterior aspect of the sacrum, and to the coccyx. |
| d'. | Ligament of the right umbilical artery. | | | Termination of the aorta. |
| e. e. | Branches of the prostatic plexus of veins formed by the vesical veins and those of the penis, which pass under the symphysis pubis. | | | Termination of the inferior vena cava. |
| e. e'. | Cut ends of two prostatic and vesical venous | | | Left common iliac artery. |
| | | | | Left common iliac vein. |
| | | 1. | | |
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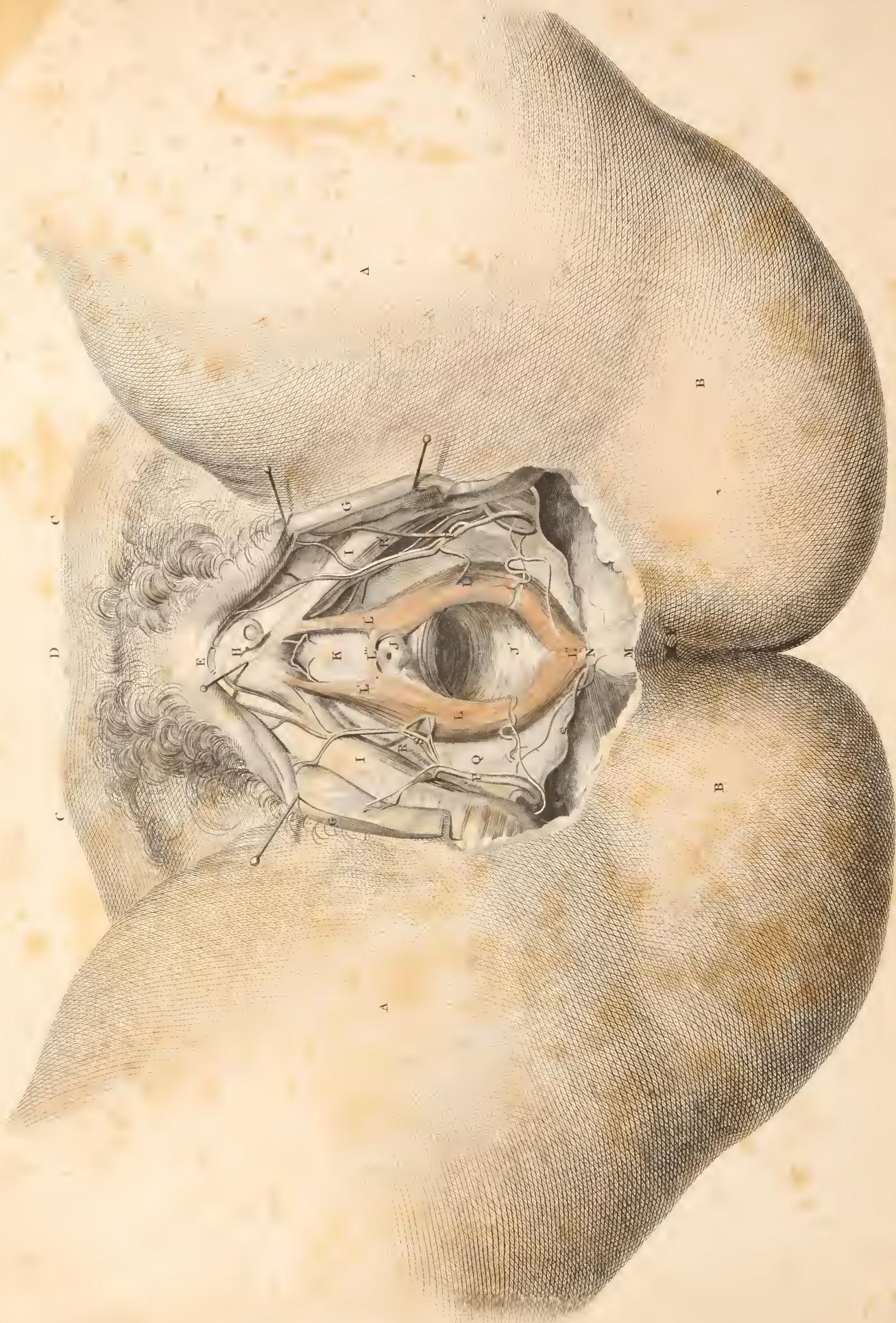


PLATE SIXTEENTH.

VIEW OF THE HAM OR POPLITEAL SPACE.

| | | | |
|-------------|---|----------|--|
| A. | Inferior portion of the thigh. | T. | into two branches, which anastomose with the external saphena nerve or its branches. |
| B. | Superior portion of the leg. | T'. | External saphena vein concealed under the aponeurosis. |
| C. | Inner condyle of the femur. | T''. | Hook applied to the external saphena vein, to draw it outwards. |
| D. D. D. D. | The skin in the neighbourhood of the popliteal space. | | Three terminating branches of the external saphena vein, one of which passes behind the thigh, and forms the origin of the deep crural vein; another, more or less developed, joins with the popliteal vein; the third, less constant than the others, becomes subcutaneous, and proceeds on the inner side of the thigh to the internal saphena vein. |
| E. E. | Subcutaneous cellular tissue. | U. | Popliteal vein. |
| F. | Internal saphena vein. | U'. | Popliteal artery. |
| F'. | Internal saphena nerve. | V. | Place where the artery is found, a little on the outer side of the internal popliteal branch of the sciatic nerve. |
| F''. | Place where the internal saphena nerve becomes superficial, on leaving the sheath of the sartorius muscle. | X. X. | External and internal superior articular vessels. |
| G. G. | Portion of the fascia of the leg. | X'. X'. | External and internal inferior articular vessels. |
| G'. G'. | Fibrous expansion detached from the tendons of the biceps and semi-tendinous muscles. | Y. Y. | Vessels and nerves of the muscles of the calf of the leg. |
| H. | Biceps muscle. | Z. Z. Z. | Popliteal lymphatic ganglia. |
| I. | Semi-tendinous muscle. | a. a. a. | Lymphatic vessels which follow the tract of the external saphena vein, and terminate in the popliteal ganglia. |
| J. | Semi-membranous muscle. | b. b. b. | Other lymphatic vessels which follow the internal saphena vein to the ganglia of the fold of the groin. |
| K. | Rectus muscle. | c. c. | Deep lymphatic vessels of the leg entering the popliteal space. |
| L. | Sartorius muscle. | d. | Large lymphatic vessels ascending the tract of the femoral vessels. |
| M. M. | Hooks applied to the gastrocnemii muscles. | | |
| N. | Plantaris muscle. | | |
| O. | End of the sciatic nerve leaving the sheath at the back of the thigh. | | |
| O'. | External popliteal nerve. | | |
| O''. | Internal popliteal nerve. | | |
| P. | External branch of the external saphena nerve. | | |
| P'. | Cutaneous branch, which detaches itself from the preceding nerve. | | |
| Q. Q. | Twin branches of the internal popliteal nerve. | | |
| R. | Internal branch of the external saphena nerve. | | |
| S. | End of the posterior cutaneous nerve of the thigh, accompanying the popliteal portion of the external saphena vein, and separated | | |

